PUBLIC SAFETY

## Face Injured in Half Auto Accident Victims

➤ NEARLY HALF the victims of automobile accidents suffer serious injuries to their faces, including damage to teeth and jaws, Dr. Jacob Kulowski of St. Joseph, Mo., reports in the *Journal of the American Dental Association* (July).

The significant frequency rate of facial injuries among automobile casualties, as distinguished from all other traffic injuries, has not been determined before. This, Dr. Kulowski explains, is because face injuries in the past have been included with head injuries in general.

His report was based on a study of 661 survivors of automobile crashes who were hospitalized at the Missouri Methodist Hospital from late in 1949 through 1954.

In these 661 casualties, 295 persons, or 45%, received varying degrees of facial injuries as distinguished from injuries of the head.

The commonly accepted idea that the seat next to the driver is the "death seat" has not been substantiated either by recent studies made by the Cornell Automotive Crash Injury Research or Dr. Kulowski's observations.

"Both sides of the front seat present large injury potentials," he states. "The back seat is still considered to be the safest seat in the car, however (about three times more so than any other area, according to the Cornell investigators)."

He said the windshield, dashboard and steering control, as well as all other knobs and protuberances of a car's interior design are implicated in injuries of the facial regions above all other parts of the body.

Dr. Kulowski was critical of the engineering emphasis in devising safety aids.

"From the standpoint of the physician and dentist," he said, "it would seem that the attention of the engineer has been focused on the prevention of injuries to the head when facial structures should be getting more attention."

Science News Letter, July 14, 1956

PHYSIOLOGY

## Alcohol Seeps Through Stomach After Death

➤ ALCOHOL can seep through the stomach wall after death. Consequently, by ordinary tests, a person who had drunk as little as three ounces of whisky shortly before death might mistakenly be classed as drunk if he was killed in an accident or murdered.

This finding, with medicolegal implications, is reported by Dr. Houghton Gifford of Stanford University School of Medicine, San Francisco, and Dr. Henry W. Turkel, coroner, City of San Francisco, in the *Journal of the American Medical Association* (June 30).

When an autopsy is done to determine the cause of death, as in police cases, tests for alcohol in the blood may be made if there is any suspicion that the person had been drinking before death.

Ordinarily the doctor doing the autopsy takes blood for the alcohol test from the blood that pools in the sac around the heart after the great blood vessels have been cut and the heart removed. Occasionally, he may take blood from the heart before removing it, or he may take it from that which has pooled in one of the lung cavities during the autopsy.

Because of the seepage of the alcohol through the stomach wall even after death, tests on blood from such locations will give higher values than they should for the amount of alcohol consumed before death, the San Francisco doctors report.

The best place for taking blood, to avoid such false findings, is from the femoral vein running down the thigh, they found.

In their tests they put six- and three-ounce quantities of common brands of 86 proof whisky into the stomachs of 11 cadavers, using a stomach tube. The whisky was allowed to remain in the stomach from 10 to 24 hours. Then blood samples were taken from the usual sites and from the femoral vein on one side. Before putting the whisky into the stomachs, blood had been taken from the femoral vein on the other side, for comparison with that after putting the whisky into the stomach.

Science News Letter, July 14, 1956

HOME ECONOMICS

## 100 Cities Now Have Homemaker Service

➤ HOMEMAKER SERVICE, modern substitute for the grandmother or aunt who helped out in emergencies in the old days, is now available in about 100 large cities in the nation.

More cities and rural areas need this service, Dr. Martha M. Eliot, chief of the U. S. Children's Bureau, has reported.

"Homemaker service," Dr. Eliot said, "means that when the mother is ill and out of the home, or incapacitated, or when some other equally grave family emergency arises, a mature, motherly woman steps in to keep the family going by looking after the needs of the children until the mother can return or until the emergency abates.

"Homemaker service also is used to help older people stay in their homes, rather than move into institutions because they no longer are able to cope with household problems.

"It can be provided by either a public or a voluntary agency which is set up to give the supervision necessary in the program."

The cost is relatively not great, Dr. Eliot reported. In many communities, the rate of pay is between $1.50 and $1.75 per hour. Agencies finance most of the cost, but some families are able to pay for part or all of the service they get.

Science News Letter, July 14, 1956

# IN SCIEN

AGRICULTURE

## Modern Wheat Strains Surviving Drought

➤ MODERN VARIETIES of wheat have successfully resisted the severe drought in much of the nation's midsection.

Parts of Kansas report yields of up to 26 bushels per acre.

U. S. Department of Agriculture horticulturists say improved strains of wheat mature earlier, thereby avoiding the hottest, windiest time of summer.

Late-maturing varieties of wheat planted by pre-1920 farmers were unable to stand drought conditions. Strains of wheat developed since that time have improved total yields by one bushel per acre for each day of earlier maturity. Present-day wheats mature as much as two weeks earlier than the old kinds.

Improved varieties of wheat, many of which were named after hardy Plains Indians, include Pawnee, Comanche, Wichita, Kiowa, Ponca and Triumph. Earliest is Triumph, maturing two weeks sooner than the old Turkey variety in Oklahoma.

Scientists say, however, that early maturity has disadvantages. Chief among these is susceptibility to late frost. Any strain that matured earlier than Triumph would be impractical.

Modern strains of wheat have not entirely solved the drought problem. Severe dry weather early in the season can wipe out a crop. Farmers in some parts of Kansas are plowing under their wheat.

Science News Letter, July 14, 1956

HORTICULTURE

## Small Trees Urged For City Landscaping

➤ SMALL TREES are being recommended for city use by U. S. Department of Agriculture horticulturists.

Many of our larger trees are so old that maintenance is becoming difficult and some are being replaced, according to a report in *Agricultural Research* (July).

Small trees cost less to maintain and go well with low, ranch-type houses, the report states.

A little known but attractive small tree suggested in the report is the Japanese Yeddo hornbeam.

Introduced into this country more than half a century ago, the Yeddo hornbeam has not had wide popularity, due perhaps to the emphasis on big trees. It is adapted to the humid East from southern New York southward, and is tolerant of many soils. The 30-foot tree assumes a reddish-bronze color in the fall.

Science News Letter, July 14, 1956

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# CE FIELDS

ICHTHYOLOGY

## First Officially Reported Marlin Found Near Africa

➤ THE FIRST MARLIN to be officially reported from the vast stretch of Atlantic Ocean off the west coast of Africa has been described. The 12-foot fish was found ashore at Lobito Bay, Angola, north of southwest Africa.

The discovery is reported in *Nature* (June 30) by Dr. J. L. B. Smith of Rhodes University, Grahamstown, South Africa.

Dr. Smith says that "as marlins are known to travel widely, it is astonishing to find that the range of these fishes in the Atlantic is far more restricted than might be supposed. Up to the present, there has not appeared in scientific literature any report of the occurrence of any species of marlin anywhere near the whole length of the extensive western coast of Africa."

Although the marlin reported by Dr. Smith had been partly eaten by sharks, a photograph of the fish shows it had an overall length of 144 inches and weighed about 450 pounds. Dr. Smith states it is not certain whether the fish is a "blue," or a "black" marlin.

The "Lobito" marlin, Dr. Smith cautions, is not proof "that marlin are abundant along the west coast of Africa, for no others have been reported there and this may have been a stray."

Science News Letter, July 14, 1956

EDUCATION

## More U. S. Youngsters Study Foreign Languages

➤ MORE YOUNGSTERS than ever before are learning foreign languages in grade schools in the United States.

Last year in 203 communities in 37 states, 271,617 children from kindergarten through the sixth grade were receiving foreign language instruction in U. S. public schools, the U. S. Department of Health, Education and Welfare reports.

The most popular language, the HEW report shows, is Spanish. This is followed by French, German and then Italian, Latin, Norwegian and modern Greek.

Swedish and Japanese are taught in a few communities.

No Russian is taught in any elementary school.

The study of foreign languages by our youngest students in the public schools has increased so fast that enrollment has jumped almost 60 times since the beginning of World War II. According to the latest report, the number of grade school students tackling a foreign language is already more than one-third the number of their older brothers and sisters in the public high schools.

It is even fast approaching the number of students of foreign languages in all U. S. colleges and universities.

"The more the practice of teaching a foreign language in the elementary schools grows," the Office of Education people say, "the greater of course is the need for teachers who not only know a foreign language but also have the training in how to teach it."

One answer to the need, it is pointed out, is the summer workshop. Last year, 29 colleges sponsored workshops and it is expected the number will increase this summer.

Science News Letter, July 14, 1956

NUTRITION

## Men, Women Differ In Amino Acid Needs

➤ WOMEN do not need as much tissue-building amino acids in their food as men.

The amino acids combine to form proteins that in turn help build muscles, enzymes, blood and hormones.

Studying the amino acid requirements of girls at the University of California and at the University of Nebraska, nutritionists found the girls' amino needs were lower than those suggested by other researchers for young men.

The girls, all volunteers, ate synthetic diets containing every known nutrient necessary for health, but the amounts of amino acids were varied. Cornstarch, sugar, fat, and synthetic vitamins and minerals were the daily menu. Pure amino acids dissolved in water were added to the ration. Small amounts of fruits and vegetables made the meals more enjoyable.

After six to eight weeks of this diet, analysis of the girls' body products showed Drs. Marian E. Swendseid of California and Ruth M. Leverton of Nebraska just how much of each of certain essential amino acids young women need. Their work is reported in *Agricultural Research* (July).

Science News Letter, July 14, 1956

PHILOLOGY

## Use Two Words in Writing Honey Bee

➤ TO WRITE the name of the insect that provides honey, use two words "honey bee," Dr. R. E. Snodgrass of the Smithsonian Institution recommends.

The rule, he says, is: If the insect is what its name implies, write the two words separately; otherwise, write as one word.

Thus, "house fly" is written in two words because it really is a fly, but "butterfly" is one word because it is not a fly at all.

"Aphislion" and "silverfish" are written together because the former is not a lion and the latter is not a fish.

Dr. Snodgrass cites the rule in a new book "Anatomy of the Honey Bee." (See p. 28.)

Science News Letter, July 14, 1956

MEDICINE

## Rauwolfia Drug Now Being Tested

➤ A NEW RAUWOLFIA extract that may be useful either as a local anesthetic or in treating blood vessels disorders is being tested by Drs. J. D. Kohli and N. N. De of the Central Drug Research Institute, Lucknow, U. P., India.

The new drug is called rauwolscine. It comes from the snakeroot plant family that has given reserpine and other anti-high blood pressure and relaxing drugs.

Its important action is in blocking nerves which normally are stimulated by the adrenal gland hormone, adrenaline or epinephrine.

In large doses, however, it produces psychic and sexual excitement in animals. In this respect it is like another drug, yohimbine. Chemically, it is alpha-yohimbine.

Whether in small doses rauwolscine can be used as a medicine is now being tested. Details of the work so far are reported in *Nature* (June 23).

Science News Letter, July 14, 1956

BACTERIOLOGY

## Clue to Life at High Temperatures Found

➤ ORGANISMS that thrive at temperatures high enough to stop the growth of most living creatures do so because their proteins are particularly heat stable.

This heat stability seems to stem from more effective hydrogen and hydrophobic bonding and decreased electrostatic repulsion between molecules.

These are the findings of Purdue University professor of bacteriology Henry Koffler and his assistant, G. E. Mallet. They studied the whip-like cell extensions known as flagella, comparing those from heat-resistant thermophiles with flagella from mesophilic bacteria that live under more temperate conditions.

Flagella are made up of fibrous proteins similar to some found in blood, muscle, skin and hair.

Using urea and acetamide, agents that break hydrogen bonds, the scientists discovered that flagella from thermophiles are more resistant to these hydrogen bond breakers than those from mesophiles. Thus, a partial explanation of differences in the heat stability of these protein aggregates lies in more effective hydrogen bonding in thermophiles.

Using dodecyl sulfate, which disrupts hydrophobic bonds, the researchers achieved similar results. Flagella from thermophiles are more resistant than mesophile flagella to this anionic detergent.

Finally, they found that flagellar proteins isolated from thermophilic bacteria possess only about half the basic and acidic groups found in similar proteins from ordinary bacteria.

Science News Letter, July 14, 1956