

are watching with interest the power alcohol plant built by the Chemical Foundation and the Farm Chemurgic Council at Atchison, Kans.

The making of motor fuel from crops grown on farms has been urged by the Farm Chemurgic Council movement. As a result there is wide support for this project in the agricultural sections, particularly in the corn states.

Both the policies of the U. S. Department of Agriculture and the Republican party are considered to be favorable to the continuation of intensive research of possible industrial use of farm products. Recently research possibilities compiled by the Farm Chemurgic Council were issued in a press release by Secretary of Agriculture Wallace.

The possibility that "new applications of alcohol, processed from the products of the soil, may increase the usefulness of the internal combustion engine" was mentioned by President Roosevelt in his recent World Power Conference address.

Science News Letter, October 10, 1936

CHEMISTRY

Dr. Bergius Defends Power Alcohol Popularity

DENYING that alcohol blended gasoline is losing favor in Germany, Dr. Friedrich Bergius predicts that "a proper blend of ethyl (grain) alcohol, methyl (wood) alcohol, benzene and gasoline bears promise of supplying the world with the ideal motor fuel for internal combustion engines."

Dangerous carbon monoxide in the exhaust gases would be reduced to the vanishing point by this properly blended fuel, Dr. Bergius contended in his statement issued by the Farm Chemurgic Council, protagonists for power alcohol made from farm products.

The Bergius opinion is considered a reply to a recent U. S. Bureau of Foreign and Domestic Commerce report that alcohol blended motor fuel was losing popularity in Germany. Dr. Bergius explained that the German situation with regard to farm products is now quite different from that in the United States and that there is a smaller surplus of potatoes and other starch and sugar crops from which power alcohol in Germany can be made. He does not expect synthetic gasoline made from coal by his process to conflict with power alcohol since 20 to 25 per cent, twice the amount now usually blended, could be utilized effectively in Germany if the alcohol were available.

Science News Letter, October 10, 1936



A Spoon For Each Dish

THE bewildering array of silverware that confronts you at a banquet has its counterparts in the natural world. Animal jaws, insect mouthparts, bird beaks are often even more specially adapted to one particular kind of food or drink than are the bouillon spoons, salad forks, or meat knives that lie in a glittering row on the table.

Parrots and their kin the parrots, for example, have first-class fruit-knife beaks. They are largely fruit- and seed-eaters, and their tools are forged accordingly, with strong points to break through tough skins, and a broad, sharp blade on each side, for cutting.

Beaks of the meat-eating hawks and eagles are sometimes said to be like those of parrots, but the resemblance is only of the most general and superficial kind. They resemble the fruit-cutting kind of beak about as much as a steak-knife resembles a fruit-knife. And the beaks of their less fastidious cousins, the buzzards and vultures, being used only on carrion, need not be so sharply pointed or well whetted as are the highly developed flesh-hooks of the true birds of prey.

Beaks of birds like crane and stork, and on a smaller scale the snipes and sandpipers, are something between forks and forceps, for they can plunge into the dish to get their tidbit, but they pick it up by seizing it instead of spearing it.

Of spoon-like beaks there are a plenty, and they are used like spoons, too. Ducks are an outstanding example. They can "snobble" up grain from dry ground, as you might spoon popcorn out of a bowl, or they can go nuzzling along a pond bottom, scooping up worms, crayfish, plant tubers, and whatever other edible tidbits there may be in this natural "duck soup."

There are, of course, freak beaks, just as there are freak knives and forks and spoons. Nobody can imagine why such birds as the hornbill and the toucan should have received the doubtful blessings of oversized feeding organs. Nor why the spoon of the flamingo should have been so bent that the bird has to stand on its head and use its beak upside-down.

Omnivorous man, with his array of ingenious metal "beaks," can feed on a thousand things, but the birds, given only one feeding-utensil apiece, have to stick pretty much to one course all their lives. It is only the ones with the generalized beaks, like robins and barnyard hens, that can manage a highly varied diet, like unfashionable folk who have only a minimum of "eatin' tools."

Science News Letter, October 10, 1936

PALEONTOLOGY

African Ape Fossils Not So Old as First Thought

FURTHER details now available on the important great-ape fossil discovery in South Africa by Dr. R. Broom of the Transvaal Museum indicate that the skull is probably not as ancient as the Australopithecus fossils found twelve years ago in a different locality in South Africa, though it still belongs to the same genus or general group of primate animals (*See SNL, Oct. 3*).

In his report (*Nature, Sept. 19*), Dr. Broom states, "I think the Taungs deposit will probably prove to be Lower or Middle Pleistocene, while the Sterkfontein deposit is most probably Upper Pleistocene. I therefore think it advisable to place the new form in a distinct species, though provisionally it may be put in the same genus as the Taungs ape."

This means that both specimens are of animals that lived during the Ice Age, rather than before it—a difference in time of a million years at the very least. It also means that they lived after man had appeared. These particular specimens therefore could not have been a part of man's ancestry, though Dr. Broom regards Australopithecus as on or near the human line of descent.

The estimated size of the brain of the new specimen is 600 cubic centimeters, considerably larger than that of the average gorilla. The average white man's brain measures about 1,400 cubic centimeters, and the smallest normal human brain was about 1,100 cc.

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