

## CARBON DIOXIDE MAY MAKE DRINKING SAFER

In pre-Volstead days carbon dioxide was used in the preparation of alcoholic beverages to make them more drinkable. Now it may be used after drinking to revive "dead drunks" who have imbibed not wisely, but too much - so much, in fact that their lives are in danger.

Dr. F. T. Hunter and Dr. S. G. Mudd of Boston, have tried the effect of carbon dioxide administration in a few cases of acute alcoholic intoxication with results indicating a comparatively rapid revival from the coma. Also in studies of normal persons receiving measured doses of alcohol it was apparent that the increased ventilation produced by breathing carbon dioxide caused a more rapid fall in the concentration of alcohol in the blood than occurs when the breathing is not stimulated in any way. As the majority of deaths from alcoholism occur from the ingestion of lethal doses of alcohol and not from other poisons in the beverage the two physicians suggest that the administration of carbon dioxide may be of value in all cases of alcoholic coma.

The results are obtained by augmented respiration. Carbon dioxide can be diluted in air or oxygen for inhalation. A five fold increase in the volume of breathing, the doctors state, can be produced safely. It has been in wide use for some time for resuscitation after carbon monoxide poisoning and as a means of rapid deaerization after operations.

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"BIRTH CONTROL" AMONG PLANT LICE DUE TO LIGHT

An important step in the solution of one of the most puzzling biological problems that confronts students of crop pests has been announced in the publication of the results of researches on plant lice, carried on by Simon Marcovitch, entomologist at the Tennessee state experiment station.

Plant lice, or aphids, as they are more properly called, have a most peculiar system of reproduction. Each fall, after mating has occurred, the female lays her eggs and dies. In the spring these hatch, and the young are all females - the plant louse is about the most advanced feminist in the lower animal world. These spring-born females have no wings, but many of her first broods of offspring (for she rears many families) may have wings, which enable them to migrate to other plants, frequently at a considerable distance. The really remarkable thing about the spring and summer broods, however, is that the young are produced without fathers. Males seem to be totally unnecessary in this Adamless insect Eden all summer long, and these "parthenogenetic" females have everything to themselves. ("Parthenogenetic", by the way, is simply Greek for "virgin-born").

But in the fall, when the days grow short and chill, males appear among the fatherless children, and the next generation - the eggs that will lie in sheltered places over winter - are the results of ordinary matings. Thus the cycle is completed.

The question has always been, why should males appear in the fall, after having been kept out of the way all summer? The answer commonly accepted until now is that the cool weather is the stimulus. But Mr. Marcovitch's experiments indicate that length of day, and not temperature, is the cause.

Aphids kept at summer temperatures produced males as soon as the days grew short in autumn, but when the days in the laboratory were artificially lengthened with electric light the fatherless female generations succeeded each other, even though the temperature was allowed to fall to a low point.

An immediate practical application of his discovery is suggested by Mr. Marcovitch. The saving of orchards from severe damage depends on inducing the first broods in the spring to migrate from the trees to the other plants on which they feed. Mr. Marcovitch suggests that orchards be artificially lighted, just as they are now frequently heated, thereby inducing the winged generations to appear early and "move on" promptly. It might also be worth while to keep up the illumination in the fall, preventing the development of males, and thereby also preventing the production of fertilized eggs, which alone are able to live over winter.

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#### DROUGHT-CRAZED JACKRABBITS OVERRUNNING BIDAHO RANGES

Hordes of jack-rabbits are attacking farms on the south bank of the Snake river in Idaho, with the condition so serious that some ranches have lately been abandoned for the year.

Residents have observed rabbits hurling themselves into the river and swimming seventy-five yards to gain the north bank, where forage is more plentiful. The rabbits come across in hundreds, going into the river above upper Salmon falls and coming down stream below the falls. The low water makes the plunge through the falls possible.

Water holes in the Bruneau desert, on the south side of the Snake river, have gone dry, and the jack-rabbits have come down in droves to the junction of the Salmon and Snake rivers, hunting water. They have eaten everything green, and even the roots of the alfalfa and parts of the hay stacks.

Fences intended to be rabbit-proof are of little aid, as the animals, crazed for food, have dug under the barriers. Cases are evident, also, where they have even broken through poultry netting placed below the ground. The north side of the river, where fences are better and there are fewer rabbits, has escaped without great damage.

Several drives have been made and large numbers of the rabbits killed, but neither drives nor poisons have materially offset the present situation.

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#### DESERT INSECTS HAVE A HOT TIME

Tolerance of heat to a most astonishing degree by insects that live in deserts is indicated by the results of researches published in the Proceedings of the Royal Society by P. A. Buxton.

Observing insects in the deserts of Palestine, he found some species quite active and cheerful when the midsummer sun raised the temperature of the sand to 140 degrees Fahrenheit. Temperatures of the insects themselves were also measured, and were found to be lower than might have been expected, due probably