

PHYSIOLOGY

Raises Drunken Rats

Science is doing its level best to ascertain the effects of alcohol on the living system.

Dr. Frank Blair Hanson assisted by Miss Florence Heys of Washington University, has been conducting an alcoholic experiment with ten generations of white rats that if translated into human years and generations would have covered a period of approximately 500 years.

The rats, all descendants of a single pair of identical ancestry, were divided into two groups. One set was kept under normal laboratory conditions while the others beginning at 20 days of age were put into an air tight fume tank over evaporating alcohol. They were left in this alcohol saturated atmosphere until they were all completely "drunk."

"The first effect of the alcohol," says Dr. Hanson in a report of the experiment that will appear in a forthcoming issue of the *Journal of Heredity*, "was to stimulate the rats to great activity. This exhilaration soon passed, however, and was followed by a period of sullenness and quarrelsomeness. The last period of the treatment was characterized by increasing drowsiness ending in unconsciousness. At this point the rats were removed from the tanks. It often took several hours for the animals to sleep off the effects of the intoxication.

"The direct effects of the alcohol upon the tests was disastrous in the extreme. The rate of growth was considerably slower in the alcoholic rats than in their untreated brothers and sisters. There were cases of paralysis and gross tremors. The

(Just turn the page)

SOCIOLOGY

British Birth Rate Falls

England is still suffering from a dearth of babies.

The actual number of births in England and Wales last year was as small as in the year 1860 when the population was only half its present magnitude, according to statistics just issued by the Registrar-General for the year 1926. The rate of 17.8 births per thousand is the lowest reached so far except during the years of the war.

This reduction in births is compensated only to a small extent by the low general death rate of 11.7 per thousand and the low infant mortality rate of 70 per thousand.

Science News-Letter, November 5, 1927

PSYCHOLOGY

Child's Confidence Needed

A mother and father can live in the same house with a child for years and still never know that child, because they have never won its confidence. This is the observation of Goldie Basch, of the Philadelphia Child Guidance Demonstration Clinic. Meanwhile, the neighbor or schoolmate in whom the child does confide is the person who is really influencing him and shaping his character.

Because so many parents ask how they can go about winning the confidence of a child, Miss Basch has listed the following suggestions:

"Begin early—as soon as the child can talk. With an older child begin today.

"Take time for a talk every day—it is the most important and interesting thing you have to do. Bedtime is a good time. Show an eager interest in whatever the child wishes to talk about, but never pry, and ask as few questions as possible. Don't give advice, unless asked for. Then be wholly frank and honest. Put yourself in your child's place; try to see things through his eyes. Never criticize him or his friends at such times. Don't even allow yourself to feel critical. Respect his opinions; convince yourself, for the time being, that he is an adult, and treat him accordingly."

Criticism and preaching will stop confidences from the child, Miss Basch warns.

"If you show yourself to be thoughtful and sympathetic when talking to him, he is much more apt to become so himself," she states. "Your child will be guided by what you are rather than by what you tell him to do."

Science News-Letter, November 5, 1927

BIOLOGY

The Wisdom of Worms

Philosopher and specialist,
To take the sum of things, a worm
Wriggled with scientific twist
And wholly efficacious squirm
Up to its door, and peering through
Saw faintly shining overhead
A lovely speck of distant blue,
Which having seen, it sagely said,
"Since that is all, then let me turn
Back to my work beneath the ground;
I know a thing for which I yearn
Full six feet deep—there truth is
found."

—William Adams Slade.

Science News-Letter, November 5, 1927

MEDICINE

New Drug For Epilepsy

Epilepsy, the mysterious, incurable "falling sickness" that has afflicted mankind since the beginning of history, is now under medical attack from three separate angles.

Several years ago it was established that starvation brought about certain changes for the better in epileptics so long as they could endure the drastic treatment. Recently a diet that approximates some of the conditions of starvation has been found to give very successful results with epileptic children. Confined to the prescribed diet which calls for much fat but little sugar, afflicted children have shown marked improvement lasting over a period of years.

In addition, careful and understanding psychological handling has proved to be of great value in avoiding much of the mental and emotional strain that leads up to epileptic seizures.

Now a new weapon in the shape of the drug luminol-sodium is announced by Dr. J. Tyler Fox in a report to the medical journal *Lancet*.

Dr. Fox has tried out the drug in carefully regulated doses on members of the epileptic colony in Surrey, England, of which he is superintendent. Of 167 cases 50, or around 30 per cent, showed benefit that is likely to be permanent. Fifty-one cases after registering improvement for a period of three months apparently became tolerant to the drug. The remainder either showed only temporary gains or remained unaltered by the treatment. A very few became worse.

The best results are to be expected from young patients, Dr. Fox pointed out. Some patients have continued to receive the treatment for periods as long as four years, he declared. The drug should be administered with great caution because in some cases the number of fits have increased after the luminol was stopped. In a few cases where the number of fits decreased the behavior of the patients became violent and uncontrolled. The treatment appears to be of benefit in certain types of cases but should not be undertaken where careful supervision and accurate records of each seizure cannot be maintained for each patient.

Science News-Letter, November 5, 1927

Mount Rainier at one time was a seething volcano.

BIOLOGY

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Drunken Rats

(Continued from page 295)

normally white, well-groomed coats of the animals became discolored and unkempt. In appearance they were thoroughly degenerate.

"The eyes of the treated animals exhibited the most striking abnormalities. After only a few treatments many of them became totally blind. By the time the alcoholic rats were mature and mated nearly all were blind."

But of the 1,688 young born to the alcoholic parents throughout the ten generations only one was born with defective eyes, while among the control animals two defective eyed animals appeared. Descendants of the blind rat of alcoholic ancestry had normal eyes indicating that alcohol is powerless to induce hereditary eye defects in the white rat, at least. A small proportion of the descendants of the blind rats of control group had defective eyes.

"It seems," said Dr. Hanson, "that in almost any species a certain small percentage of defective individuals will be produced. In order to demonstrate the inheritance of induced eye defects or other abnormalities it will be necessary first to know the normal rate of production of spontaneous defects in the stock employed and then significantly modify that rate by alcohol or other deleterious agent."

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Thousands of African natives have organized to fight the tsetse fly which carries African sleeping sickness.

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