NATURE RAMBLINGS by Frank Thone

BOTANY

Geraniums

AS WINTER takes solider hold upon the land, and there is less and less to see in the woods, we begin to take refuge and consolation in potted plants indoors. For man is, by some old memory, a creature of semi-tropical woodlands and never feels at home in the temporary Arctic he has to endure every year in high latitudes. So he builds little bowers to keep his soul alive until spring.

Of all potted plants, the red geranium is the staple, the standby, the one thing that a housewife will have if she lacks all other houseplants. It is handed down from mother to daughter through generations, it is passed along from neighbor to neighbor through whole streets, it is multiplied into dozens by "slips" stuck into a bottle of water.

The geranium is well adapted to the hard life a potted plant has to live in the average house or apartment. It has to get along with intermittent waterings and yet keep its water-supported life going in an atmosphere almost as dry as the Sahara. It can do this because it is a plant of semi-arid habitat to begin with. It has a thick, succulent stem that serves as a water reservoir, and can keep the plant alive even if drought causes the leaves to wither and drop off. And its vitality is so high that even after a drought of this kind it will break crazily into bloom as soon as you give it a cupful of water.

Cheap if you like, plebeian if you choose to call it so, the red geranium has its own good place in the world and fills it praiseworthily and well.

Science News Letter, December 30, 1933

Lavender oil distilled by steam is said to have exceptional aromatic qualities.

HEREDITY

Poisons Produce Hereditary Changes in Sex Cells

WHEN the male of the white mouse is poisoned with alcohol or certain plant toxins, such as ricin, the sex cells are affected in a specific way. A true mutation, that is transmitted as a functional change in the animal's descendants, is caused. These observations have been reported by Dr. Agnes Bluhm of the Kaiser Wilhelm-Institut of Biology, Berlin, in *Forschungen und Fortschritte.*

The change shows itself in the children in the fact that there is a greater mortality in their litters.

If, however, the children of an alcoholized male are mated among themselves, the mortality rate is less in the grandchildren and may be restored to normal in the great grandchildren. This fact would seem to indicate that the alcohol had simply a harmful effect which was wiped out in two generations and had not produced a really hereditary characteristic.

Dr. Bluhm believes, however, that a distinct mutation is produced in the sex chromosomes of the male, which in interbreeding is obscured by the fact that in the fertilization of an egg by the affected sperm cell there is produced in the egg an antagonistic substance, something after the manner of a toxin-antitoxin reaction.

This belief is based on the results of cross fertilization. When a male of the alcoholized strain is mated with a normal female the mortality in the young is always greater than when a female of the alcoholized strain is mated with a normal male.

When the male mouse was poisoned or immunized by gradually increasing doses of ricin his immediate progeny showed hypersensitivity to small doses of ricin. Like the alcohol effect this physiological reaction tended to disappear in the successive generations, but its existence in the male cell could be brought out by cross fertilization. That the effect was specific for the ricin and not simply a general weakening or injury was demonstrated by testing the progeny with other poisons, snake venom, for example, or abrin.

It has long been known from the work of Prof. H. J. Muller and others that radiation of the sex organs with X-rays will produce definite mutations which express themselves in structural features of the descendants. Dr. Bluhm's work indicates that chemical reagents may cause similar mutations which express themselves, however, in specific functional alterations in succeeding generations.

Science News Letter, December 30, 1933

MEDICINE

Tapeworm Eggs in Brain Cause So-Called Epilepsy

CONVINCING proof that many cases diagnosed as true epilepsy are actually cases of infestation with tapeworm larvae was presented to the Royal Society of Tropical Medicine, London, by Col. W. P. MacArthur, professor of tropical medicine at the Royal Army Medical College and consulting physician to the British Army.

The epileptic seizures are due to invasion of the brain by the eggs of the tapeworm, which form small, cyst-like masses called cysticerci, and particularly to the degeneration of these parasites after they have died, Col. MacArthur said. He has found as many as two hundred cysticerci in some brains.

Investigating the occurrence of epilepsy among soldiers, he found over sixty definite cases of infestation with cysticerci. Twenty such cases have been diagnosed in hospitals during the current year. Six or eight soldiers recently invalided from India and victims of cysticercosis had been certified as cases of "true epilepsy." These cases of cysticercosis, the medical name for the condition, have no symptoms to distinguish them from ordinary epilepsy.

Cases of cysticercosis had been wrongly diagnosed as acute mania, melancholia, delusional insanity, dementia, brain tumors, and the nervous disease, disseminated sclerosis.

Col. MacArthur believes that in England many persons in civil life who have been stigmatized as hereditarily insane are suffering from cysticercosis acquired during residence abroad.

Science News Letter, December 30, 1933