



Seagulls

► VOYAGERS OVERSEAS often have the monotony of the world's greatest desert—the open ocean—relieved by the sight of seagulls far out from shore. These birds have the habit of following departing ships and of meeting incoming ones, frequently some hundreds of miles from the nearest land. Sailing vessels, which go more slowly and less relentlessly than fast steamers, sometimes have gull companions all the way.

It isn't just friendliness that brings the gulls. Like all living things, they have to have food, and the gull is a follower of the humble but useful calling of garbage collector. It watches most closely the galley portholes, and can be depended on not to let any edible morsels fall into the water unattended to.

Fishing fleets are even more ardently followed by gulls than are passenger boats. They throw overboard quantities of offal and unmarketable fish, which are as so much manna to the hovering birds. Sometimes they make themselves nuisances by alighting on the decks and stealing such fish as they are able to make off with.

So used are we to gulls as sea birds that "seagull" has become a single word. Most of us say "seagull" when we mean "gull." When we hear of seagulls against a back-

ground of prairie, or desert, or Rocky Mountain peaks, at first it causes us to blink, and to doubt the seriousness of the speaker.

Yet gulls—real seagulls—are commonplace sights around the shores of a number of our large inland lakes, apparently quite as much at home as ducks or snipe or herons. They forage along the waterfronts of Chicago and other Great Lakes cities, and being indefatigable scavengers, they find congenial pickings. Even in winter they remain on this chain of American Mediterraneans, apparently little discouraged by snow on shore and pack ice on the water.

Presumably their winter casualty list is high, but there are always enough survi-

vors or new immigrants to keep up the gull population.

The gull population of the Great Salt Lake and of Yellowstone Lake is not permanent. Gulls there have become migrants, as regular in their seasons as robins or bluebirds. They go to the Gulf of California in winter, it is said, as do also the pelicans with whom they compete for fish in these upland waters.

If you visit Salt Lake City, the Mormons are sure to show you the Seagull Monument in the Temple grounds. Seagulls played the role of robins, as insect destroyers, at a very critical period in the history of the Mormon colony, and they are treated with an almost religious reverence in Utah now.

Science News Letter, August 18, 1951

BIOCHEMISTRY

Light on Brain Processes

Glutamic acid, chemical that has raised intelligence level of some feeble-minded children, prevents mice deaths from sound-caused fits.

► GLUTAMIC ACID, remarkable chemical that has raised the intelligence level of some feeble-minded children and has improved the learning ability of rats, now has been used on mice to prevent deaths due to sound-caused fits.

This research, which throws light on the chemical processes of the brain and may help explain why glutamic acid sometimes makes people brighter, was conducted at the R. B. Jackson Memorial Laboratory in Bar Harbor, Me., by Drs. Benson Ginsburg, of the University of Chicago, Sherman Ross, now of the University of Maryland, Mildred J. Zamis and Agnes Perkins.

At the Jackson Laboratory, mice have been bred which are specially susceptible to noise. When these mice are put in an ordinary galvanized iron washtub, eight out of ten will go into convulsions at first sound of a doorbell. And up to nine out of every ten of those with fits may die.

Giving the animals glutamic acid does not prevent the noise-caused fits to which they have inherited sensitivity. But it does prevent many of the deaths. Recoveries are increased by 39%. Surprisingly, the lives saved by the chemical are chiefly those of males.

Glutamic acid is an amino acid which is made in considerable amounts in the bodies of mammals. It is a non-essential in diet.

In attempting to explain theoretically the action of this chemical, the investigators reason that it acts as it does precisely for the reason that it is a non-essential. A small surplus of glutamic acid added to a satisfactory diet favors a higher concentration in the brain cells of a related chemical, alpha-ketoglutaric acid, thus increasing the

energy output. Glutamic acid is one of a large number of chemicals capable of affecting brain metabolism and it acts through the chemical process known to biochemists as the tricarboxylic acid cycle. This is a dynamic cycle in brain metabolism about which little is actually known scientifically; it is important in providing oxygen to the brain cells.

The effects of glutamic acid on intelligence may depend upon the same metabolic events, it was suggested. Reason for the conflicting results that have been obtained when glutamic acid was tried in an effort to boost intelligence may be that the different investigators did not use genetically uniform subjects. Individuals probably differ in their inherited ability to respond to this chemical.

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INVENTION

Low-Lead Glass Designed To Use in Television Tubes

► A LOW-LEAD glass suitable for use in television image tubes, and other glass bulbs or tubes used in the electrical field, has been awarded a patent. It contains much less lead than the types now used and is, therefore, lighter and less costly.

The usual high-lead glass is made from a mixture containing approximately 29.5% lead oxide. In the new product, silica and the other metal oxides are used but the lead oxide content employed is only approximately 11.4%. The inventors use a combination of lead oxide with barium oxide, using a relatively small amount of the latter. However, they use a larger amount of silica

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