

furnished another clue as to where we are located in our own galaxy. The presence of numerous hot blue stars, for instance, signals the direction to one spiral arm.

Just suppose astronomers could carry their telescopes to a planet in the Andromeda Nebula. What would our Milky Way galaxy look like from there? Calculations show it would look much like the Great Nebula does to us. Photographs would probably reveal individual giant stars in our galaxy, including most of our variable stars.

Magellanic Cloud Galaxies

Two companion galaxies could also be spotted nearby. They are the Magellanic Clouds. These Clouds are both irregular galaxies which from the earth look like faint luminous clouds broken off from the Milky Way. Unfortunately, they are too far south to be seen from the United States.

The two Magellanic Clouds and the Milky Way galaxy form a triple system. Our galaxy is nearly 30 times as bright as the Small Cloud and six times as bright as the Large Cloud. Yet these clouds are not dwarf galaxies, Dr. Shapley has shown, but are probably brighter and more massive than most galaxies. They whirl around with us in our travels through space.

Science News Letter, September 13, 1952



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BIOCHEMISTRY

Nerve Gas Antidote

► AN ANTIDOTE to Parathion and some other nerve-gas types of insecticides, and maybe to the nerve gases themselves, has been discovered.

It is called Buscopan. In treatment of laboratory animals poisoned by Parathion, it is much more effective than atropine. Atropine has so far been considered the best drug for treating both nerve-gas and Parathion-insecticide poisoning.

Buscopan is a German drug. Chemically, it is 1-N-butylscopolammonium bromide. It comes from scopolamine, the "twilight sleep" drug once popular as a childbirth pain-reliever.

The effectiveness of this drug as an antidote to poisoning by insecticides, Parathion, dimethyl Parathion and Systox, was reported by Dr. William B. Deichmann of Albany Medical College to the International College of Surgeons, Chicago. (See p. 168.)

Buscopan, in Dr. Deichmann's opinion, is "terrifically better" than atropine. It acts at

the ganglia, which are collections of nerve cells occurring along the chains of sympathetic and parasympathetic nerves. Atropine acts at the nerve endings rather than at the ganglia of these nerve chains. This different spot at which the new drug takes effect may be what makes it, in Dr. Deichmann's experience, so much better than atropine.

Dr. Deichmann emphasized that so far he has only tried the new drug in experimental animals and only as an antidote for the three insecticides, Parathion, dimethyl Parathion and Systox. While these are related to the nerve gases, they are not the same and their effect is somewhat different. Symptoms of Parathion poisoning develop more slowly and are not as responsive to atropine as those of the nerve gases.

Dr. Deichmann also finds that both atropine and Buscopan are more effective when given with oxygen and glucose than when given alone.

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SURGERY

Partial Lung Removal

► FOR SOME TB patients having a surgeon cut out the diseased portion of the lung may be better than any other method of treatment, it appears from a "preliminary report" of such an operation on 87 patients.

The operation is called segmental resection of the lung. The promising results in 87 cases were reported by Capt. Clifford F. Storey and Lieut. Bruce F. Rothmann of the U. S. Naval Hospital, St. Albans, Long Island, N. Y., at the meeting of the International College of Surgeons in Chicago.

So far, 59 patients have been discharged from the hospital. Of these, 38 are gainfully employed, and 16 are well and apparently able to work but have been advised not to do so for the present. Another 25, all well with negative sputum, are still in the hospital because of a strict policy of insisting on six months' bed rest after the

operation. This method of treatment is for "carefully selected" patients in whom the tuberculosis is confined to a single segment of the lung or in whom the primary focus occupies a segment and no more than one additional adjacent segment is involved.

The method is not a "cure-all" suitable for all types of patients with TB of the lung.

Studies of lung function shows that there is less impairment of function after removal of a segment of lung than when other surgical methods are used for similar cases.

"There is no significant change in function following segmental removal of the diseased portion of the lung," the Navy doctors reported.

Science News Letter, September 13, 1952

Eggs should be stored large-end-up to keep the yolks well-centered.



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BIOLOGY TEACHERS

You can get better microscopic slides for less! Since comparative histology tells so much about the nature of man, this study should begin early and be enlarged on in the liberal arts and teachers colleges, and in the university. Like English, it should be a required study for all students in every school of intermediate and higher education. The result would be a better citizenry: better parents, better teachers, better preachers, better physicians, a better man, and a better society, which is the purpose of education. Premedical students should make comparative histology their biggest course, because the medical schools devote very little time to the study of this most important discipline. The medical students should realize that knowledge of cellular biology gives meaning to pathology, anatomy and physiology and is the natural and least costly approach to all medical problems. *Begin study histology in high school.*
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