GENERAL SCIENCE

Carnegie Reports

Annual round-up tells of nebulae resolved into individual stars, better rangelands in the West, and further results with chlorellin, antibacterial substance.

See Front Cover

➤ PERHAPS the most interesting astronomical result of the past year has been the resolution into stars of several extragalactic nebulae, among them the two companions of the Andromeda nebula and the central region of the Andromeda nebula itself. This is described in the new yearbook of the Carnegie Institution of Washington.

Photographs taken on red-sensitive plates with Mount Wilson's 100-inch telescope by Dr. Walter Baade have for the first time resolved into stars such nebulae as Messier 32 and those known by the New General Catalogue Numbers of 205, 147 and 185. Previous to this, NGC 147 and 185, shown on the cover of this SCIENCE NEWS LETTER, were not known to belong to the group of galaxies which, relatively speaking, are close neighbors to our own universe. Messier 32 and NGC 205 probably accompany the Andromeda nebula in its travels through space, Dr. Baade's work revealed.

Science News Letter, December 23, 1944

Ex-Nova for Companion

➤ THE BLUE companion of R Aquarii is an ex-nova, investigations conducted by Dr. Rudolph Minkowski of Mount Wilson Observatory showed. Measurements of a pair of plates made 16 years apart indicated that the nebulosity seen around R Aquarii was ejected 600 years ago. With its low velocity of ejection, the blue companion of R Aquarii is believed to be related to the recurrent novae RS Ophiuchi and T Pyxidis.

Science News Letter, December 23, 1944

Better Rangelands

➤ BIGGER and better bluegrass stands will some day wave over rangelands in the West, now depleted through overgrazing and drought. Creation of the new kinds of grasses through hybridization is described in the new yearbook.

One of the species used in the new hybrids is a giant grass, reaching a height of six feet, that grows in parts of the Pacific Northwest. Crossed with the more conventional kinds of bluegrass, it contributes something of its size and rapidity of growth, besides other desirable characteristics, states Dr. H. A. Spoehr, chairman of the division of plant biology.

The breeding of new kinds of range grasses is being conducted as a joint project with the U. S. Soil Conservation Service, with Dr. Jens Clausen, Dr. David D. Keck and Dr. William M. Hiesey carrying on the field work, mainly in the Pacific Coast states. Once a desirable new grass species has been obtained, it is propagated by stolons or runners; this asexual reproduction preserves the valuable hybrid properties against loss through segregation, which would occur if seeds were depended on.

Science News Letter, December 23, 1944

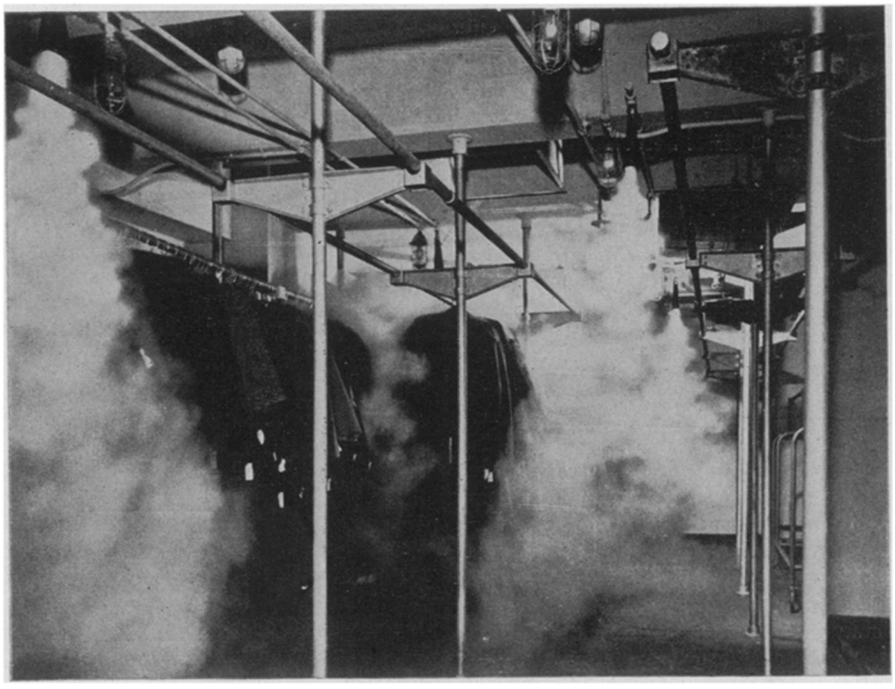
Chromosomes Doubled

➤ BREEDING plants to produce higher yields of useful substances, and lower percentages of harmful drugs, occupied the attention of Dr. H. E. Warmke and Harriet Davidson, of the Institute's division of genetics. Carrying on from preliminary results obtained a year ago, they found that they could get bigger roots, containing a higher percentage of rubber, from the Russian dandelion, koksaghyz, if they subjected parent plants to chemical treatment that doubled the number of chromosomes in the cells of the offspring.

Science News Letter, December 23, 1944

Chlorellin Hits Bacteria

➤ FURTHER results with chlorellin, the antibacterial substance produced by the green alga, Chlorella, are announced in the yearbook by Dr. H. A. Spoehr, Dr. J. H. C. Smith, Dr. H. W. Milner



NOT A LEAK!—This is friendly, fire-smothering carbon dioxide gas pouring out of ceiling nozzles to protect precious fur coats hanging in a storage vault. It is released automatically from high-pressure storage cylinders when the first warning drift of heated air touches a special heat detector. Walter Kidde & Co., who designed this newest protection for the minks and sables which are not easily replaced today, have also harnessed the same gas for use as a fire-extinguisher in planes, ships and tanks, and to inflate rubber life-rafts and lifebelts.