

BIOPHYSICS

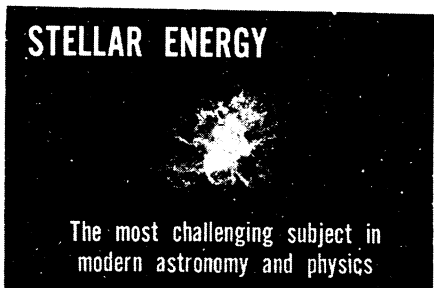
Human Communities Like Swarms of Molecules

➤ HUMAN COMMUNITIES act more like swarms of molecules than like mechanical models. It is disastrous, says Dr. R. Furth, Birkbeck College physicist in London, to make forecasts of human community behavior from mechanical models, or from statistics of past performances.

Molecules, he says, are influenced by all their brother molecules, and, therefore, the probabilities of the behavior of a particle depend on the configuration and orientation of all the other particles. This is true of human communities, in the opinion of the physicist.

Dr. Furth advocates using statistical mechanics to predict human community behavior. This, he says, is a combination of mechanical models and statistics.

Science News Letter, September 15, 1951



Life histories of stars described in fascinating book

Just published! **ASTRONOMY OF STELLAR ENERGY AND DECAY** by Dr. Martin Johnson (of the Royal Astronomical Society) tells why stars erupt, pulsate or explode—how much light and heat different stars radiate—what sources of energy (gravitational or atomic) replenish lost stellar energy—chemical composition of stars. Discover hundreds of interesting and important facts about giant and dwarf stars, the nova catastrophe, the determination of a star's age, black body temperatures, Bethe cycle, etc.

Astrophysics—what is fact and what is guess-work? Book provides unique behind-the-scenes view of astrophysics, shows how we measure luminosity, mass, size, temperature, etc., of stars. It tells what an observatory can measure, what can be definitely inferred from observation and what must be further explored for verification. After you read this book, you'll be better equipped to judge for yourself whether new "discoveries" announced in newspapers are fact or merely conjecture. No knowledge of mathematics needed to understand bulk of book; special mathematical section added for experts.

"This book should appeal to every amateur of astronomy who wants to be a little more than an amateur . . . it deserves to be recommended to every bright science student for his private reading; he will enjoy it . . . book is meant for all those who . . . are eager to obtain a real insight into the present state of (astronomy)."—London Times Literary Supplement.

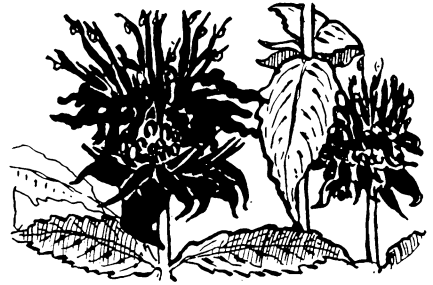
"Dr. Johnson has admirable gifts of conciseness and lucidity, so that it is impossible ever to lose interest in his exposition."—Books of the Month.

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Wild Bergamot

➤ A CLOSE rival to goldenrod and wild aster for the honors of the autumn roadside is the straggling, touseled blue flower known variously as wild bergamot, horse mint and mountain balm.

It holds out against the frost quite as well as either wild aster or goldenrod, it endures dust as bravely, and it holds up to the passer-by its little explosions of electric-blue flowers that are more eye-compelling even than the asters.

This flower sweeps across the whole eastern two-thirds of the country, from Canada to the Gulf, thriving best in straggling brushlands or open woods, and often taking complete possession of long patches of roadside hedge or between-field fencerows. Thriftless, a weed if you will, it demands no more than a poet's sustenance and gives us a poet's pay therefor.

MEDICINE

Polio Damage Lessened

➤ INFECTION WITH what is said to be the world's newest disease germ may reduce the severity of an attack of polio, it appears from studies reported to the Second International Poliomyelitis Conference in Copenhagen, Denmark.

The report was by Dr. Gilbert Dalldorf, New York State Health Department scientist who discovered the new virus about five years ago.

The virus is called Cocksackie after the Hudson River town in New York where it first was found. Several strains of Cocksackie viruses have since been discovered.

They cause various short illnesses with fever, sore throat and pain in the chest and abdomen. Sometimes infection with one of these viruses seems like a mild attack of polio. They cause diseases such as "Devil's grip," which has also been called pleurodynia, epidemic myalgia and Bornholm

It is not always blue. A few species go in for red, and they achieve in this hue an even more piercing effect than the arlight tint affected by the blue varieties. One species, native in Texas and now considerably used in cultivated flower gardens, is of such a vivid, assertive, even quarrelsome quality of cerise that it always has to be planted by itself. There simply is no other flower that can grow near it without clashing, not even a white one.

Why this flaming plant should have got the name *Monarda didyma* is beyond guessing—there is nothing in the least doubtful about it.

The whole genus to which the wild bergamot belongs shares with its other relatives in the mint tribe the secret of producing pungent oils used in various medicaments. As "Oswego tea," another relative was much used in folk-doctoring by the Indians and early colonists.

A more serious and authentic use was made of the plant during the first World War, when the European supplies of drugs were seriously interfered with. At that time, the wild plants of this genus were gathered by the ton and distilled to make thymol. When the world drug market was restored to something like normalcy, this temporary weed-distilling industry was abandoned.

Wild bergamot is worth introducing into informal flower gardens, and it is one of the easiest of herbs to transplant. It is a perennial, with slender rootstocks that have a most astonishing vitality. Just pull up the plants by the roots and wrap them up in three or four thicknesses of newspaper.

When planting, cut off their tops to within six or eight inches of the ground and set into the ground with a dipperful of water to get them started again. They will take hold and grow in good shape.

Science News Letter, September 15, 1951

disease; "three-day fever;" and an illness known as herpangina, Dr. Edward C. Cur- nen of Yale University reported to the conference.

Summer outbreaks of infantile paralysis in New York State during the last four years have been mixed epidemics of polio and Cocksackie virus, Dr. Dalldorf reported. Records of the cases in New York suggested but did not prove that Cocksackie virus is more often associated with less severe polio.

Experiments showed that immature mice were resistant to inoculations of polio virus if these were given several days after inoculation with the Cocksackie virus.

But some authorities in the past few months have suggested the exact opposite, namely that combined infections of the two viruses were more severe than those of the polio virus alone.

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