

# Missouri Botanical Garden Bulletin

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## MOTION PICTURES OF PLANT LIFE.

Through the generosity of a few friends of the Missouri Botanical Garden it has been possible to engage the services of Mr. A. C. Pillsbury for a part of the present year to make moving pictures of plants, both macroscopic and microscopic. Mr. Pillsbury is widely known through his lectures and is recognized as the most expert producer of films of plant life in this country, if not in the world. As the official photographer of Yosemite National Park, he had opportunity to observe the wild flowers of that region, and after years of study and experience has perfected unique methods of recording the life history of plants. By means of a clock-work mechanism and other ingenious devices of his own invention, Mr. Pillsbury is not only able to secure records of the movement of parts of flowers, leaves, etc., which have never before been visualized, but his success in obtaining pictures of what goes on in the cell of the plant as seen under the microscope has never been equalled. It is this phase of the work in which the Garden is most interested, for it seems probable, by taking a series of pictures extending over a day or a week and then running them before the eye in a few minutes that activities of the cell will become visible which direct observation through the microscope has not revealed. Through the success that Mr. Pillsbury and others have had with films of this kind, it should not be long until every biological laboratory will come to regard a moving picture outfit as essential as the microscope. So far as is known the Missouri Botanical Garden is the first botanical garden to undertake this sort of an investigation.



The wealth of growing material at the Garden will make it possible to obtain moving pictures of many plants not hitherto followed through their development, the budding and blooming orchids of various species affording an unusual opportunity in this direction.

A special studio, including developing and printing rooms, has been fitted up for Mr. Pillsbury, and four movie cameras are now installed, two for microscopic and two for macroscopic work. Because of the great value of such films in teaching, it is expected that later certain subjects showing the hidden activities of plants will be made available for classes in botany in schools and colleges.

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### THE MEDICINAL PLANT GARDEN

*Aims and Purposes.*—Although thousands of synthetic medicaments have been prepared for the relief or cure of the bodily ills of mankind, many of these have failed to replace the crude products derived from the vegetable kingdom. Indeed it is doubtful whether synthetic drugs will ever take the place of such drugs as cinchona bark, opium, nux vomica, belladonna, digitalis, and many others that are daily dispensed by the professional pharmacist. Man has from remotest periods employed various barks, roots, and other parts of potent and non-potent plants and probably will always resort to their use in the treatment of his bodily ills. Bastedo has aptly stated that "Medicine it sometimes cures, often relieves and always consoles." This seems to be especially true of the employment of the many quaint and mysterious drugs used from time to time by mankind. Today the word "drug" includes all substances utilized in the treatment of disease, whether derived from the vegetable, animal, or mineral kingdoms, but the origin of the word, from "drugan," "to dry," indicates that earlier it was restricted to dried plants.

Medicines, like other things, pass through certain specific cycles. For instance, years ago, with the introduction of the coal tar synthetics, a wave of utilization of this much-varied compound swept over the entire world. More recently we