



#### PRESIDENT'S PALM

Close-up view of the top of the newly-named *Rooseveltia frankliniana*, giving a good idea of the size and beauty of its leaves.

#### ASTRONOMY

## Gigantic Stellar Outburst Discovered in Distant Nebula

### Is Only Nineteenth Supernova Ever Reported in Astronomical History; Can't Be Seen With Naked Eye

**D**ISCOVERY of a gigantic celestial explosion, a supernova, or star that has flared in a far distant nebula to extraordinary brilliance, probably hundreds of thousands that of the sun, has been made by Dr. Fritz Zwicky while observing on Mt. Palomar, Calif., where the 200-inch telescope is being erected.

This newly-discovered outburst is located in the elliptical nebula known as NGC 4621, a member of the Virgo cluster. It is about 15th apparent magnitude, which means that it can be seen only with a powerful telescope. Identification of it as a supernova was made from a spectrum obtained at Mt. Wilson Observatory, and Dr. Walter S. Adams announced the discovery by communicating the information to Harvard College Observatory, clearing house for astronomical information.

This supernova is only the nineteenth reported in astronomical history. Dr.

Zwicky has made a special search for supernovae and during the past few years has found several.

Famous among the rare supernovae of the past is Tycho's star, which appeared in November 1572 and was for some days visible in daylight and brighter than Venus at her best. Another temporary star, observed by Kepler in 1604, was as bright as Jupiter and remained visible for two years. These were much closer to the earth than the supernova just discovered by Dr. Zwicky and were therefore seen by the unaided eye.

More frequent are temporary or "new" stars giving out less light. These ordinary novae are not in the same class with the supernovae. But they attract much attention, both on the part of lay observers of the stars and the astronomers. Nova Herculis which burst forth shortly before Christmas 1934 was a spectacular ordinary nova.

Scientists speculate on what remains of novae when they fade away. One suggestion is that they become stars consisting of neutrons with no ordinary matter in their make-up. The neutron is one of the basic building blocks of matter and it was discovered in 1934. Such a spent star of neutrons would be extremely dense. The earth's mass on the same density would be a ball less than two miles in diameter.

The outburst of a nova transcends in magnitude all other known physical catastrophes. Astronomers do not know just what happens. Favorite among theories is that there is a tremendous release of energy within the atoms of matter composing the star. Another suggestion is that novae occur when two stars collide.

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#### BOTANY

## New Genus of Palm Named For President Roosevelt

**A** MAGNIFICENT tropical palm, symbolic at once of victory and peace, has been named in honor of President Roosevelt: *Rooseveltia frankliniana*. Specimens were collected on Cocos island in the Pacific during the President's last fishing cruise, by Dr. Waldo Schmitt of the Smithsonian Institution. The new genus and species were named by Dr. O. F. Cook, U. S. Department of Agriculture botanist.

President Roosevelt is not the first chief executive to have a genus of palm trees named after him. A fine type of fan palm, that grows in a chain of oases among California's desert mountains, bears the name *Washingtonia*. It is now widely cultivated as a park and street tree. There is also a *Jeffersonia*, a lovely spring wildflower, named in honor of Thomas Jefferson. Benjamin Franklin, whose surname is the President's given name, is memorialized by a beautiful magnolia-like Southern shrub, *Franklinia*, now extinct except in cultivation.

President Roosevelt's palm has had a curious history. Tiny Cocos island, where it grows in dense forests on the inland heights, is without permanent inhabitants. Early visitors to its shores thought that the inland palms were the same as the coconut trees that grew along the beach, and did not trouble to go inland for a closer look. One later scientist, Henry Pittier, recognized the tree as something distinct, but did not collect specimens or give it a name. It remained for Dr. Schmitt to bring out specimens, make exact notes and take photographs.

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