



### Discovery Forest

A RESOLUTION calling for the establishment of a national forest to commemorate the four hundredth anniversary of the discovery of the Mississippi river by De Soto, in 1541, was presented at the recent meeting of the Sixth North American Wildlife Conference, at Memphis, Tenn., by Edward J. Meeman, editor of the *Memphis Press-Scimitar*. It was unanimously adopted by the Conference, and the proposal will be recommended to the proper authorities in Washington.

A good deal of latitude can be permitted in locating this forest, for the valiant Spanish explorer covered much territory in his long and toilsome journey across what is now the southern United States. His exact track will probably never be known, nor the precise spot where he stood when he first beheld America's mightiest river. This is, in a way, an advantage, for it will be possible for the forest to be located anywhere in the general area through which his route is known to have passed. Probably most people would prefer to have it touch the banks of the Mississippi at some point—perhaps even to lie on both banks of the river if possible.

A unique feature of Mr. Meeman's proposal is the provision for including in the Discovery Forest a specially designated Grove of Repentance, as a perpetual acknowledgment by Americans of the present generation of the sins they and their forebears have committed against nature, in over-exploiting and ruining so much of the vast treasure of natural resources that existed in the great central valley of this continent when white men first penetrated into it. This grove would be a restoration to primeval conditions, as nearly as this is possible

now, and it would stand untouched, to be visited only by scientists and the rangers having charge over it.

Carrying out the entire project need not be undertaken at once. Mr. Meeman suggests, because of the present national emergency. However, he feels that it should be possible for national and state authorities to take the necessary preliminary action, to survey the appropriate site or sites, to make "token" plantings, and to hold formal dedicatory exercises in this, the quadricentennial year.

*Science News Letter, March 8, 1941*

#### PHYSICS—RADIO

## Clouds of Material Bullets From Sun Affect Earth Radio

CLOUDS of bullets which are continually shot from the sun make it possible for radio waves to travel long distances by night as well as by day.

Recent studies by the staff of the Department of Terrestrial Magnetism of the Carnegie Institution of Washington have revealed new facts about these material particles which cause the aurora borealis and are mainly studied by their effect on the magnetic condition of the earth.

These particles travel across the 92,900,000 miles separating sun and earth much more slowly than the visible and invisible light waves, which make the trip in about eight minutes. That is why they produce an effect at night.

Invisible ultraviolet waves, similar to light, strike atoms in the uppermost parts of our atmosphere, ionize them by knocking electrons from them. This makes an electrical ceiling that prevents radio waves from escaping into space, reflecting them downwards instead, perhaps many times, and thus sending them around the curved globe.

This effect is only in the daytime hemisphere—that which faces the sun, yet the radio ceiling persists into the night. But the particles being slower, even the night time part of the earth is constantly running into them, and the effect, in ionizing the upper atmosphere, is similar to that of the light waves.

The bombardment is described, in a statement issued by the Carnegie Institution of Washington, as "coming in clouds of particles, of various sizes from mere wisps to diameters many times the earth's radius, which form a more or less continuous stream, perhaps of the structure of a string of pearls and in shape like the arms of a spiral nebula."

This "P-radiation," as the stream of bullets is called, is presumed to come from hypothetical "M-regions" of great activity on the sun's surface.

*Science News Letter, March 8, 1941*

#### ENGINEERING

### Uses Airplane Principles In Camera Platform

USING engineering principles of the modern airplane fuselage, a new camera platform or "boom" is being used by the M-G-M Studios. Measuring nine feet long, and weighing 3,100 pounds instead of 7,600 pounds which a usual boom of this size would weigh, the camera can be laid on the floor, or raised to a height of 16 feet. So well is it balanced that it can be raised or lowered with one finger.

*Science News Letter, March 8, 1941*

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