

except that the vegetation is dominated by low bushes, mosses and lichens, instead of the grass of the Plains states. The principal large game is caribou on the lower levels, and mountain sheep as one gets up into greater altitudes.

MUCH TIMBER LAND NOW LYING IDLE

Despite the efforts of the U. S. Government in the past half century to encourage forests, 81 million acres of land suitable only for timber growth are now lying idle. This denuded area, moreover, is chiefly in the East where the lumber is most needed for manufactures.

But this is not to the discredit of the United States Forest Service. Without itsaid, the figure would have been much worse. The forestry service has taken great strides towards conservation since Dr. Franklin B. Hough began his research and educational program of reforestation and protection in 1876, the semicentennial of which will be celebrated this year.

A half-century ago there were no Government-owned forests set aside for conservation. Today 21 per cent. of the 470 million acres of forest land in the United States is owned by the public--nation, state, or municipality, reports William B. Greeley, chief forester.

We use forest products in such a multiplicity of ways that they are a great drain upon our forests--in pencils, paper, turpentine, rosin, soap, shoes, automobiles, boats, and even in artificial silk. As the population goes uphill our forests go downhill. Four times as fast as the forests can be replenished, they are being depleted. Two hundred and fifty million trees of average size are cut every year, or an area equal to Massachusetts, Connecticut, and New Jersey put together. A large amount of this lumber is used by newspapers, for it takes 16 acres of spruce trees to make the paper for one Sunday edition of a metropolitan newspaper.

Mr. Greeley sees as one help to the situation the making of forestry a part of diversified agriculture, that is, forest planting on farms and the practical instruction of farmers in forestry. Already 150 million acres of forest land--nearly one third the total for the entire country--is in farm holdings. Fifteen states now maintain forest nurseries from which small trees are furnished at nominal cost to farmers and other landowners desiring to plant them.

NEW RAYS FILL UNKNOWN GAP

Another gap in the spectrum of radiation, which includes light, X-rays, radio waves, and the very short rays investigated by Millikan, has now been filled, it was announced recently by Wynn Williams of the University of North Wales. He has been making investigations of sparking between electrodes and accidentally found the new rays, which are believed to fill part of the gap between the longer X-rays and the short ultra violet rays, which lie beyond the violet in the visible spectrum. It is stated that the new rays will penetrate air for several meters and will go through thin celluloid films, but are stopped by solids such as gold leaf and even thin mica.