

dominates the whole position. The masts on the Alexandra palace will probably be about 600 ft. above sea-level, and there are few local obstructions. In the London area, it is understood that a wavelength of 6.6 m. will be employed for the visual and 7.2 m. for the sound broadcasts. As these rays are propagated in practically straight lines, their range does not extend much further than the visual horizon. The London area will be roughly a circle of radius 30 miles. There are some outstanding financial problems that have to be settled, such as the relative values of the televising and broadcasting rights of a prize fight. In the cinema industry, coloured pictures have greatly improved, so that it only needs stereoscopic projection to perfect them.

Effects of the 1934 Drought in the United States

It was only to be expected that the American drought of 1934 would extend well into the growing season of 1935, in some parts of its extensive area, and this is proving to be the case. In a number of articles that have been issued by Science Service, Washington, D.C., during the past few months, the gradual contraction of the stricken area has been traced. In one such article, dated March 13, early spring rains in the Plains were mentioned, and a great excess from the Ohio Valley to the Gulf, sufficient to delay spring ploughing. On March 27 light rains were described as having eased the situation in the northern part of the western drought area; but dust storms were reported in the completely dry region in eastern Colorado and western Kansas and in Texas. On April 20 an improvement was noted in Texas and Oklahoma, and a hope on the part of the forecasters in the Weather Bureau that western Kansas and eastern Colorado might soon be relieved by invading depressions. Articles dated May 1 and 2 showed that this hope had not been fulfilled, the area in question remaining to represent the temporary "Great American Desert". A faint sprinkle of rain was described as having evaporated as fast as it fell in Dodge City. In the relieved areas, the cold weather and sodden fields, and the resultant delay in farming work, were said to be accepted with complacency after the previous extremes of drought and heat.

Dust storms, leading to the loss of the cultivated surface soil, had become a commonplace occurrence in the United States before the drought had nearly reached its greatest extent, causing great inconvenience and material damage to the States lying to the eastward of the driest region, as well as to western farmers. The drought itself is held, however, to be only partly responsible, as the dry soil would not have been blown away had the Plains not largely been deprived of their former permanent grass covering, of which the roots would have bound the soil in place through even the worst periods of deficient rainfall. Another article describes one of the processes whereby the drift of loose soil has been to some extent countered. This process, known to farmers as 'listing', consists of specially deep ploughing with the aid of motor-driven tractors. A special plough is used, which throws the soil on both sides; the

furrows may be as many as fifteen feet apart, and are driven at right angles to the prevailing winds, which are generally from the north-west. Where the soil is heavy the tops of the ridges are covered with something more coherent than the normal surface tilth, and this partly accounts for the efficacy of the method, which, however, is due mainly to the fact that as the loose soil begins to move under the action of the wind, it tends to fall into the furrows and to be trapped in them. It is stated that the Soil Erosion Service does not regard this 'listing' as a solution of the problem of wind-erosion, the real solution being to restore the permanent grass, much of which was ploughed up during the War so that cereals could be grown.

List of British Vertebrates

FEW naturalists have at hand complete lists of the various groups of British vertebrata, and yet in the absence of such lists reference and checking often become unutterably tedious. The suggestion of the Association of British Zoologists that a complete check list of all British vertebrates should be compiled was, therefore, a sound proposal, and the list as it now appears will prove of value in many ways, especially to workers of wide interests. This is clearly due to the way in which the British Museum (Natural History) has applied itself to carrying out the suggestion, for apart from the Bird list (by B. W. Tucker) the work of compilation has fallen upon the Museum staff, and for the editing and publication it also has been responsible (pp. 66, price 1s.). The list is a check list and no more, giving the Latin and English names of species and often indicating by letter symbols something about the status. In contrasting this check list with the lists of other countries, one's first impression is that it is a short list, representing a land fauna not outstandingly rich in variety, and a second strong impression is that, much less than other countries, Britain has been subjected to the successful introduction of foreign animals. To the short list of animals marked as introduced should be added, amongst the mammals, the rabbit, the black rat and the brown rat, and the Japanese deer, *Cervus sika*, which is very much at home in part of the western highlands of Scotland and was introduced so long ago as 1887; amongst the birds, several species of pheasant, for *Phasianus colchicus* is now a rare species in the coverts, its place having been usurped mainly by *P. torquatus*.

Traffic-actuated Road Signals

IN a paper read before the Institution of Railway Signal Engineers by F. Edwards, an abstract of which appears in *Roads and Road Construction* for July 1, the development of systems of road signalling is described. There are two main developments which may be regarded as milestones in the progress of street traffic signalling. The first system is time-controlled and, thanks to the specification issued by the British Standards Institution, it works fairly well. Up to the end of February of this year, grants had been issued for the erection of signals at more than