

## THE NATIONAL PARKS COMMISSION

### REPORT FOR 1957-58

THE ninth annual report\* of the National Parks Commission covers the year ended September 30, 1958, and records the establishment of three further areas of outstanding natural beauty, the Minister having confirmed the Commission's orders designating the Northumberland coast, the Surrey hills and Cannock Chase. Decisions are awaited on the Dorset coast and hinterland and the Shropshire hills, and the Commission expects during the next few months to be submitting for confirmation orders for the Cornwall areas, sections of the north and south Devon coasts, the Malvern Hills and the Sussex Downs. As regards the 'Long Distance Routes', the Commission has completed its report on the South Devon Path and its work on the North Devon Path is well advanced. Solutions are being sought for a new line in the Pennine Way, the Blakehope Fell area of Northumberland, and this will leave Edale Bridge as the only major problem of the route outstanding. The Commission again comments on the good work being done by voluntary assistance in clearing disfigurements from disused gun-sites and other sites of wartime activities in the Pembrokeshire Coast National Park, the Lake District, the Peak District and elsewhere, but rightly points out that it is a national disgrace that so many disfiguring marks should still remain. It welcomes the assurance given in the House of Commons on July 2 by the Parliamentary Secretary to the Ministry of Housing and Local Government that purchasers of an airfield are now required to leave it reasonably tidy.

As regards the National Parks themselves, the Commission's report stresses the creative work being undertaken in the Peak District, where the Board's current programme includes many plans for the removal and concealment of scars and blemishes on the landscape; public access is being extended, as well as information work and the development of the

\* Ninth Report of the National Parks Commission for the year ending September 30, 1958. Pp. iv+79+8 plates. (London: H.M. Stationery Office, 1958.) 5s. 6d. net.

voluntary warden service. In the Lake District, caravan sites have received much attention and anti-litter work has increased, while in Snowdonia an economic survey of the Park is proposed with particular reference to amenity. Substantial agreement was also reached with the Forestry Commission, through the Forestry Consultative Panel, on the definition of zones within the Park where the Forestry Commission would undertake not to carry out planting, and of further zones where planting would only occur after consultation with the Committee. The Park Planning Committee for Dartmoor has now reached agreement with the South Western Electricity Board on detailed procedure for early informal consultation on proposals for overhead electricity supply lines within the Park, and its efforts to remove or mitigate disfigurements and advertising continued to meet with success. Anti-litter work further developed in the North York Moors, and in the Yorkshire Dales the West Riding Park Planning Committee reports further negotiations for public access to Barden Moor and Barden Fell.

The report of the Commission refers to new action to secure publicity for "The Country Code" and for national parks in general as well as to the campaign to abate the litter nuisance. Nearly four hundred development proposals were referred to it during the year, and the Commission does not conceal its disquiet at the granting of Ministerial consent for three major industrial undertakings in National Parks. These decisions must result in grievous damage to the landscape of the Snowdonia and the Pembrokeshire Coast Parks, and the particular and general issues involved are discussed in some detail in the report, while examples of other development issues handled during the year are given in appendixes. These three development proposals and a series of Acts with a direct bearing on the work of the Commission are regarded as the outstanding features of the year under review, but their implications are considered elsewhere.

## MAGNETIC FIELD OF THE EARTH

IN recent years the maintenance of the Earth's magnetic field has generally been ascribed to dynamo interaction between the field and convective motions in the Earth's core. Such an explanation receives support from the relatively rapid fluctuations in the field and its apparent reversals during geological times. However, theoretical investigations of the suggestion have met considerable difficulties. The field is supposed to be expanded in a series of harmonics, and in order to get soluble equations it is necessary arbitrarily to chop off the series at an appropriate point. Questions of convergence arise, and though the work of Bullard and Gellman, using all the resources of an electronic computer, made the convergence appear plausible, it could do no more.

A recent paper by A. Herzenberg\* has discussed a dynamo model for which the question of convergence

can be decisively answered. He represents the Earth by a large solid conducting sphere; two eddies in its interior are represented by smaller solid conducting spheres with their centres some distance apart, and which are constrained to rotate uniformly around diameters. The smaller spheres are in electrical contact with the material of the larger one, in which they are imbedded.

The system operates as a self-exciting dynamo if the angular velocities of the inner spheres are sufficiently great, and their axes of rotation are suitably oriented. The mechanism of dynamo maintenance is roughly as follows. The rotation of the first sphere twists the lines of magnetic force which penetrate the sphere, and generates a magnetic field large compared with the exciting field, the lines of force of the induced field being circles around the axis of rotation. This induced field is propagated through the surrounding material to the vicinity of the second sphere, where it provides a seed field

\* *Philosophical Transactions of the Royal Society of London*, A, 250 (21 August, 1958): Geomagnetic Dynamos. By A. Herzenberg. Pp. 543-585. (London: Royal Society, 1958.) 13s.