

### Protection of the Fauna and Flora of Africa

REFERENCE has already been made in *NATURE* to the recent international conference on this subject held in London (Nov. 18, p. 776). At a general meeting of the Society for the Preservation of the Fauna of the Empire on December 4, the president, the Right Hon. the Earl of Onslow, discussed in some detail the convention which has been agreed on as a result of the international conference. Lord Onslow said that in the first place the convention lays down as a principle that it is desirable to establish in all territories if possible national parks or strict natural reserves. A national park is a permanent institution such as the Kruger Park in South Africa, where fauna and flora may be strictly preserved for the benefit of the general public. A strict natural reserve is a similar area but it is devoted purely to scientific purposes, that is to say, it is primarily for the preservation of various species. With reference to the protection of special animals, in the annex to the convention there are two classes: animals the protection of which is of special urgency, and those which do not require such rigorous protection but need a modified form of protection under which they cannot be hunted without a special licence. On the question of trophies, the convention lays down a method of controlling by means of the Customs in each territory the export and import of trophies, trophies meaning heads, horns, tusks, eggs and so forth, in fact anything which is produced by an animal. Certain methods of hunting are prohibited, notably by the use of motor-cars and aircraft. Similarly, poisons or explosives for killing fish are prohibited, and also dazzling lights or nets and pits.

THE convention does not come into force until it has been ratified by four powers, but owing to the proposal of the vice-president of the conference, the Belgian Ambassador, a protocol has been signed which does not need ratification and which binds the contracting parties who have signed it, namely, all the powers represented except, so far, Abyssinia, to call another conference in four years time. This will prevent the question lapsing into oblivion, but it is sincerely to be hoped that before another conference takes place, a substantial portion of the powers that signed the convention will be carrying it into force, so that the experience gained in working may suggest modifications for the conference to discuss. Lord Onslow said that the dedication of national parks has been urged by the Society for the Preservation of the Fauna of the Empire for some time past, and he considered it a matter for congratulation that the British Government has not only adopted the idea but also has taken such strong action as to facilitate a conference being called whereby the present convention was evolved.

### River Flow Records

It is appropriate that the recent issue of the report of the Research Committee of the British Association on Inland Water Survey should be followed by the publication of a paper on practical river flow measurement such as that presented at the winter meeting

of the Institution of Water Engineers on December 1. Capt. W. N. McClean, the secretary of the Research Committee, has for several years past, at his personal charges, instituted and maintained a system of river gauging and measurement in the Ness Basin, Inverness-shire, the results of which have been noticed from time to time in these columns. On December 1 he gave a detailed account of the system in a comprehensive paper which reviewed the physical and meteorological conditions in the Ness Basin and dealt with the various features of the work carried on by the organisation known as River Flow Records which is directed by himself. The catchment area of the Basin is 692 square miles down to Dochfour Weir, which holds up the level of Loch Ness in order to provide navigable depth in the Caledonian Canal. Loch Ness is roughly 24 miles in length and has a depth exceeding 550 ft. over about one half its area of 22 square miles. A regular sway of 31 minutes duration, induced by wind, produces a variation in water level, sometimes amounting to six inches or more, which persists long after the wind has ceased, and is attributable in Capt. McClean's opinion to a pendulum effect maintained by the great depth. The greater part of the flow into the loch comes from the rivers Garry and Moriston, and the gauging of these streams formed the subject of the investigations described in the paper. Details of the apparatus employed and the methods adopted are given in supplementary notes by Mr. H. Chapman, the author's chief assistant.

In the ensuing discussion, Mr. G. J. Griffiths emphasised the importance of river gauging operations, instancing the precautions thereby enabled to be taken in the Thames basin during the recent period of drought, as a result of which there was no shortage of water supply. He put forward a plea for co-operation between catchment boards and water authorities so that the information obtained might be pooled in the interests of the community. As regards the Thames Valley, the subject is discussed in more detail elsewhere in this issue of *NATURE* (p. 869). Prof. S. M. Dixon described apparatus used on the River Severn, which he considered simpler and for that reason preferable to the apparatus illustrated in the paper. The Severn apparatus has been used for velocities up to 5 ft. per sec. in depths up to 12 ft. The estimated accuracy of the gaugings is to within 3 per cent of error. Other speakers dealt with various aspects of the subject and Mr. O. Borer cited instances of low flows of the Great Ouse—0.09 cusecs. per thousand acres. Capt. McClean, in his reply to the discussion, said that simpler apparatus had been tried on the Ness Basin Rivers without satisfactory results, and he did not think an estimated ratio of error could be confidently accepted when the recorded values of the meters had themselves to be corrected for positioning.

### High-Speed Diesel Engines for Marine Service

THE history of ship propulsion records many revolutions in types of machinery and their application, and in the plan proposed by Mr. H. R.