



SATURDAY, JULY 17, 1926.

CONTENTS.

	PAGE
Bird Protection in Great Britain. By Dr. James Ritchie	73
Physiological Optics and Psychology. By Prof. W. Peddie	74
The Future of America. By T. L. H.	76
Colloid Chemistry	77
Aspects of the Oceans. By Dr. Hugh Robert Mill	78
Our Bookshelf	79
Letters to the Editor :	
Solidification of Helium.—Prof. W. H. Keesom	81
Supplementary Note on Radiation.—Sir Oliver Lodge, F.R.S.	81
Prof. Miller's Ether Drift Experiments.—Prof. Hans Thirring	81
The Molecular Spectrum of Carbon Dioxide.—Joseph W. Ellis	82
Higher Order X-ray Reflections from Fatty Acids.—J. A. Prins and Dr. D. Coster	83
Transmutation Experiments.—Milan W. Garrett .	84
The New Element of Atomic Number 61: Illinium.—Prof. Bohuslav Brauner	84
Identity of <i>Herpetomonas papatasi</i> and <i>Leishmania tropica</i> .—S. Adler and O. Theodor	85
Pernicious Grafting.—Dr. Michael Grabham	85
Organo-Metallic Compounds.—Wm. H. George	85
Blood Reactions and Sex —Dr. F. A. E. Crew	85
X-Rays and Living Matter. By Prof. J. A. Crowther	86
The Rhynie Crustacean. By Dr. W. T. Calman, F.R.S.	89
Obituary :—	
Dr. Edward J. Bles. By Sir F. G. Hopkins, F.R.S.	90
Prof. V. A. Steklov. By Prof. A. Kriloff	91
News and Views	92
Our Astronomical Column	97
Research Items	98
Studies in Eugenics and Human Heredity in South Africa. By E. W. M.	101
Research in Illumination	102
Primitive Time Reckoning and the Calendar	103
The Need for Precision in Botanical Terminology	103
University and Educational Intelligence	104
Contemporary Birthdays	105
Societies and Academies	105
Official Publications Received	107
Diary of Societies and Conferences	108

Editorial and Publishing Offices :

MACMILLAN & CO., LTD.,

ST. MARTIN'S STREET, LONDON, W.C.2.

Editorial communications should be addressed to the Editor.

Advertisements and business letters to the Publishers.

Telephone Number : GERRARD 8830.

Telegraphic Address : PHUSIS, WESTRAND, LONDON.

NO. 2959, VOL. 118]

Bird Protection in Great Britain.

THE re-introduction to the House of Lords a few days ago of a Bill for the Protection of Wild Birds suggests a glance at some aspects of bird protection in Great Britain. The new Bill proposes to repeal the Statutes, nine in number, extending from 1880 to 1908, which regulate the legal protection of birds in this country, and to replace them by a single body of law more in keeping with present-day notions of bird protection, and in some respects more stringent in its defence of the birds and more exacting in the penalties to be demanded from law-breakers.

This consolidation of bird protection legislation is a welcome move, for the multiplicity, and to some extent confusion, of the old laws militated against their successful working, and unfortunately the need for rigorous protection is still clamant. During the present season we have had the unedifying spectacle of a well-known naturalist and observer being heavily fined for abetting in the taking of clutches, twenty-three eggs in all, of the crossbill in Norfolk. In the Grampians, Mr. Seton Gordon found that the golden eagle's eggs which he had under observation were taken from the eyrie after they had been incubated for nearly five weeks, that is to say, when the chicks were on the point of hatching and the eggs could have been of no value to the collector. These cases are symptomatic of a vast amount of raiding of the nests of the rarer birds which is taken part in and encouraged by unscrupulous collectors who have the audacity to put science in the forefront of their excuses. It is almost impossible, however, for the law unaided to check such misdemeanours. They will be discouraged and arrested only when public opinion makes its voice heard with no uncertainty in the matter.

It is gratifying to know that public opinion is awakening to the realities of the situation and that steps have been and are being taken, by the Government, by municipalities, and by private bodies, which should go a long way to arouse interest in a vast section of the public which has few opportunities of observing Nature at large. To the enthusiasm of Sir Lionel Earle, chairman of the Bird Sanctuaries Committee (England), was largely due the formation of that committee, under H.M. Office of Works, and the institution, following on the report of the committee issued in 1922, of bird sanctuaries in the Royal Parks in London. The report for 1925, just issued, shows that the sanctuaries continue to give great encouragement to bird life, and that efforts are continually being made, by increasing the amenity of the reserves from the birds' point of view, to encourage the influx of greater numbers and greater variety of wild birds. Supplementary reports dealing



with the sanctuaries at Hyde Park, Kensington Gardens, Richmond Park, Bushey Park, Greenwich Park, St. James's and Green Park show not only that the reserves were largely used as resting-places by birds on migration, but also that a very considerable variety of wild birds took up their summer residence there. At least 18 species nested in Hyde Park and Kensington Gardens, 47 in Bushey Park, and 55 in Richmond Park.

There can be no doubt that a great part of the success of a small sanctuary depends upon the selection of the proper vegetation, and that the steps taken by the Bird Sanctuaries Committee, with the view of offering an attractive food supply to winter migrants, and suitable shelter for summer residents, have done much to ensure the increasing success of the sanctuaries in the Royal Parks. These steps include the planting of berry-bearing trees and of suitable nesting bushes for summer residents, the thinning out of plantations in order that wild flowers, such as foxgloves, willow-herb, and thistles, may grow and seed, and the sowing of teasles, a winter food particularly favoured by goldfinches.

In Scotland, similar steps have been taken in the Royal Park of Holyrood, where Duddingston Loch with its extensive reed-beds, a much-frequented winter haunt of immigrant ducks, promises to become a reserve of outstanding interest. During the present season, it is recorded by Mr. Kirke Nash that the common pochard, which has not hitherto been known to nest in Midlothian, has reared two broods on the Loch.

In several cases city corporations have taken part in the sanctuary movement, the lead having been taken in Scotland by Glasgow, which has created bird reserves, with feeding-tables and so on, in its public parks. The movement is well fitted to stimulate public interest, for it affords new and hitherto unattainable opportunities to town-dwellers for the observation, if not of nests and eggs, at any rate of adult and young birds at the most interesting stage of their existence. Furthermore, it places before the minds of all and sundry, with steady insistence, the facts that birds have an interest and afford pleasure, and that they require protection. The extension of the municipal formation of bird sanctuaries in public parks is a movement worthy of every encouragement because of its possibilities in moulding a wide appreciation of living things; but it must be recognised that such steps can have no bearing on the pressing question of the protection of the rarer birds which are threatened by the attention of the collector.

For the progress made, no body deserves more credit than the Royal Society for the Protection of Birds. The annual report of this influential society indicates

the part taken by the Society's watchers in ensuring the safe breeding in certain localities of some of the rarer birds, such as choughs, Kentish plover, Norfolk plover, Dartford warbler, phalaropes, and others. It points out to how great a degree the extension of motor traffic, the breaking up of great estates, and expansive building, are gradually obliterating woods, parks, and meadows, and spreading disturbance in the countryside. In the result, the homes, haunts, and food supplies of wild birds are being altered, and a steady change is taking place in the character, though not in the numbers, of the bird population. It points out that the destruction of sea-birds caused by the deposition of oil at sea, either as waste from oil-driven ships or as cleanings of tankers, is a problem that still seems far from solution, in spite of the three-mile limit imposed upon such discharge by law. But several nations have taken up this matter with energy, and sooner or later some means may be found through international action of avoiding needless destruction.

The report states that afforestation, which had become an imperial necessity, gave many a qualm to the lover of natural woodlands not planted for profit or grown for the axe. In this connexion, the Government could not do better than emulate the action of the various States of Australia, which automatically convert forests under the charge of Government departments into wild animal reserves. Were similar measures taken in Great Britain with regard to the Government afforestation areas under the control of the Forestry Department, a first and important step would be made towards the protection of the rarer birds and beasts, and towards the realisation of that national park which Britain alone amongst the great nations still lacks.

JAMES RITCHIE.

### Physiological Optics and Psychology.

*Helmholtz's Treatise on Physiological Optics.* Translated from the third German edition. Edited by Prof. James P. C. Southall. Vol. 3: *The Perceptions of Vision.* Pp. xi+736+6 plates. (Ithaca, N.Y.: Secretary, Optical Society of America, Rockefeller Hall, 1925.) 7 dollars.

*"To the solid ground  
Of Nature trusts the mind which builds for aye."*

—WORDSWORTH.

THE issue of this volume completes a great task. The English-speaking public has now at its disposal for the first time an edition in English of the epoch-making work of von Helmholtz as it originally appeared, along with the new material which was included in the third German edition to bring the work up-to-date, and some additional matter specially