particularly along the Pakokku foot-hills. H. L. Chhibber contributed a valuable account of the extinct volcano Mt. Popa, one of the most conspicuous landmarks of Upper Burma. He also described the ferruginous concretions of the Irrawaddian Series, and the ancient slag-heaps and deserted furnaces found in the neighbourhood of Mt. Popa. Another paper by the same author described ferruginous bands of a rhythmic character occurring in the silicified tuffs of Kyankpadaung. H. L. Chhibber and L. D. Stamp collaborated in a paper dealing with the origin and constitution of the fossil wood which is such a conspicuous feature of the late Tertiary beds of Burma. The petrography of Green Island, near the mouth of the Salween, is described by L. D. Stamp, who directs attention to the extensive assimilation, lit-par-lit injection, and development of banded gneisses that have taken place. K. K. Mathur *et aliter* discussed the mechanism of intrusion and the differentiation of the laccolith of Mt. Girner, the rocks of which were described many years ago by Dr. J. W. Evans. The Ranikot beds at Thal were shown by L. M. Davies to present a more complete series of the earliest Eocene horizons than has been discovered elsewhere. B. Sahni is engaged on a revision of the fossil plants in the collection of the Geological Survey, and presented a summary of his work on the conifers, ranging from the Lower Gondwana to the Cretaceous. Other papers dealt with cordierite, staurolite and mica, and various local faunas and strata; and J. Ribeiro describes the natural caves recently discovered in Bombay. The large number of contributors and the wide variety of subjects discussed testify to the healthy activity of geological research in India and Burma.

Nearly a hundred papers were presented to the Section of Mathematics and Physics. Seven of these deal with pure mathematics, five with hydrodynamical problems, and two with relativity and non-Euclidean space. The physical papers cover a wide range. Surface tension, efflux of gases, motion of projectiles, vibrating strings, flame temperatures, entropy, radiation, scattering of light, spectra, X-ray investigation of crystals, magnetism, electrolysis, photo-electricity and wireless signalling, were all discussed, while the weather, rainfall and floods of Bengal were not forgotten. Prof. M. N. Saha, as president of the section, read a valuable paper on the application of subatomic thermodynamics to astro-physics, portions of which were printed in NATURE of May 8. The programme showed that India is keeping well abreast of recent developments in the mathematical and physical sciences.

Co-operation in Oceanography.

UNDER the title "L'Oceanographie dans la Vie International," Prof. Odon de Buen writes an interesting account of the various organisations which are materially assisting the co-operation of adjacent countries in oceanographical investigations (*Scientia*, February 1, 1926). The international movement is particularly active both in physical and biological oceanography, where the problems encountered by each country extend far beyond its own coasts, and the natural difficulties and expense of collecting data at frequent intervals over a wide area of the ocean necessitate such collaboration.

This necessity is increasing. Our present knowledge of the average conditions of the seas is built up from numerous painstaking observations made by a limited number of expeditions carried out from time to time. The fluctuations in the fisheries, of national importance to the countries concerned, centre interest more and more upon the fluctuations rather than upon the average condition in the physical and chemical conditions of the seas.

The Conseil Permanent International pour l'Exploration de la Mer now includes those countries bordering on the continental shelf from Norway to Portugal and Spain. Its influence in furthering our knowledge of the oceans in general has been potent since its foundation in 1899. Similar organisations deal with the publication of data and the co-ordination of investigations, both in the Mediterranean and also in the fertile area famed for its cod fishery north-east of North America.

These three co-ordinating organisations are represented in the Oceanographical Section of the Union International Geodesique et Geophysique by their respective presidents. It is of interest to hear that this section has commenced the difficult enterprise of publishing an annual *Bibliographical Bulletin*.

As any feral industry grows, whether it be hunting animals or fish, an accurate knowledge of the factors which control fluctuations in the population of the hunted animal becomes increasingly useful to the hunting nations. It is to gather this knowledge that the network of organisations has sprung up, fathered originally by the Scandinavian countries, to whom their fishing industry is an asset of relatively great importance. An interest in the sea is inherent in all seafaring nations, and concerted action has already been of great help to the progress of scientific oceanography.

The Swiss National Park.

PROF. CARL SCHROETER of Zürich delivered the fourth Hooker lecture at the Linnean Society on April 15 on the Swiss National Park. The movement for Nature protection is very strong in Switzerland, and civil law permits even expropriation in the interest of natural and historical monuments. The formation of the League for the Protection of Nature (Naturschutzbund) has made the matter a national one; it has about 30,000 members, who pay an annual subscription of 2 francs, or 50 francs for life membership. The League has been instrumental in many ways, but the most effective measure is the creation of the Swiss National Park, which occupies about 54 square miles in the Lower Engadine. Here shooting, fishing, manuring, grazing, mowing and wood-cutting are entirely prohibited. No flower or twig may be gathered, no animal killed, no stone removed, and even fallen trees must remain undisturbed. There are no hotels, only simple Alpine shelter huts, and camping and the lighting of fires is not allowed. The aim is to exclude the effect of human interference so far as possible: scenery, plants and animals are absolutely protected.

The Park is controlled by five trustees nominated by the Government, which pays the rent (up to 30,000 francs per annum). The League pays the incidental expenses (*e.g.* there are four resident keepers) and for scientific research which is organised by the Swiss Society for the Advancement of Science.

The size of the Park and its physiography allow of Nature equilibrium. The mean elevation is high; the snow-line consequently reaches so much as 3000 metres; the tree-limit 2300 metres. It is well wooded with extensive forests of the erect mountain pine (*Pinus*

montana var. *arborea*) and *Pinus Cembra*; mixed woods of spruce and larch, an endemic variety of Scotch pine (*Pinus sylvestris* var. *engadinensis*), and extensive areas of creeping mountain pine (*P. montana* var. *prostrata*). The herbaceous flora is rich and varied, the different geological strata allowing of both calcicole and calcifuge plants; the division between the floras of the western and the eastern Alps passes through the Park, many of the Swiss eastern species occurring only here. Animal life is abundant—chamois, marmots, deer, roes, foxes, mountain- and heath-cocks, golden eagle, etc.

After ten years of reservation the favourable effect is clearly visible: the flora of the now abandoned pastures has developed abundantly. The number of animals has much increased. From 1918 to 1925 deer had increased from 12 to 90; roe from 60 to 190; chamois from 1000 to 1250; mountain cock from 10 to 60, heath-cock from 40 to 190; ptarmigan from 120 to 310, and golden eagle from 15 to 40. The preservation of certain beasts of prey is requisite as a hygienic measure, as they kill sick animals first.

The last bear was killed in the Park in 1904. The ibex disappeared from Switzerland in 1809, but an effort is being made to reintroduce it from colonies at St. Gallen and Interlaken, which have arisen from young animals smuggled from the valley of Aosti.

All the influences of man due to shooting, fishing, wood-cutting, haymaking and so on will take time to efface, and the successional changes are being studied by a special commission of fourteen members elected in 1915 and divided into four sections, geologico-geographical, climatological, botanical, and zoological. So far forty investigators have worked in the Park. Several monographic studies have been published, and an attempt is being made to get a "complete notion of the inorganic and organic nature of our National Park."

The lecture was illustrated by a magnificent series of coloured lantern slides.

University and Educational Intelligence.

BRISTOL.—The Society of Merchant Venturers offers for competition fifteen scholarships tenable in the Faculty of Engineering of the University of Bristol, provided and maintained in the Merchant Venturers' Technical College. Candidates must be not less than 17 years of age and must have matriculated. The scholarships provide free tuition: one of the scholarships is open to pupils in any secondary school receiving grants from the Board of Education; three are restricted to pupils of secondary schools in the counties of Gloucestershire, Somerset, and Wiltshire (one to each county); ten are restricted to the sons of officers in His Majesty's Service who were killed in the War, and whose mothers or guardians are in needy circumstances; one is restricted to a son of a citizen of Bethune who has passed either the B. ès L. or the B. ès Sc. examination. A War Memorial scholarship is also offered, with a preference to a candidate who needs pecuniary help, who is the son of a former student who lost his life while serving with H.M. Forces during the War.

CAMBRIDGE.—The late Sir John B. Harrison bequeathed to the Sedgwick Museum his collection of more than 2000 rock slices; these were made from the rocks of British Guiana and the West Indies.

Dr. F. J. Gaskell, of Gonville and Caius College, has been appointed demonstrator in medicine, and Mr. E. G. Holmes, of Christ's College, has been appointed as assistant to the Downing professor of medicine.

A lectureship in advanced and economic entomology has been advertised as vacant; the stipend will be 350*l.* with a "fellowship allowance" of 150*l.* if the holder is not a fellow of a college. From this it would seem that the principle of granting an extra emolument to persons on the staff of the University who are not fellows of colleges has been conceded. Similar provisions are made in the conditions of appointment to lectureships in moral science and Persian which are also announced.

The General Board of Studies has presented a report on the readership in ethnology. The present office was created for the duration of Dr. Haddon's tenure, and he has announced his intention of retiring at the end of the present academic year. The Board considers that the subject is now well established in Cambridge and its educational importance generally admitted; it is therefore suggested that the readership should become a permanent university post.

OXFORD.—On May 12, Mr. G. R. de Beer, fellow of Merton College, the lately appointed John Wilfred Jenkinson lecturer in embryology, delivered an inaugural lecture on the organisation of the embryo. He made special mention of the embryological work of the late J. W. Jenkinson, in whose memory the lectureship has been founded; and directed particular attention to the orientation of the embryo, as manifested in the results of transplantation and in the phenomena of the 'grey crescent.'

DR. I. J. KLIGLER, formerly of the Rockefeller Institute and for the past three years Director of the Malaria Research Unit attached to the Department of Health of the Government of Palestine, has been appointed head of the new Department of Hygiene established at the Hebrew University of Jerusalem.

THE University Grants Committee's Returns for 1924–25 give 41,794 as the total number of full-time students of both sexes in the universities and university colleges of Great Britain in receipt of Treasury Grants. This is less by 1098 than in the preceding year, but the decrease is more than accounted for by the decrease (1458) in the number of students assisted under the Government scheme for the higher education of ex-service men. The tables in which the full-time students are classified according to faculties show decreases under medicine (970 men and 367 women) and technology (496 men) and increases under arts, including theology, fine arts, law, music, commerce, economics, and education (557 men and 353 women). A large proportion of the decrease in the medical group is accounted for by the dental students. In the Scottish Medical Schools there were 537 fewer men and 178 fewer women last year than in the year before. Under engineering, metallurgy, and applied chemistry there were decreases: from 3413 to 3036, from 187 to 140 and from 338 to 280 respectively, whilst the number of mining students increased from 263 to 275. The table exhibiting the home and university residence of full-time students shows that 49 per cent. came from homes within a 30-miles radius, 42 per cent. from other parts of the British Isles, 6 per cent. from other parts of the British Empire, and 3 per cent. from foreign countries. Of the men, 19 per cent., and of the women, 33 per cent. were accommodated in colleges or hostels. Next to Oxford and Cambridge and the Durham Colleges, University College (now the University of) Reading ranks highest in regard to the number of full-time students thus accommodated. The number of students in lodgings was 14,070, or 34 per cent. of the total number.