

News and Views.

THERE appears to be no end to the difficulties which beset zoological nomenclature. No sooner has one set of decisions been issued than zoologists are invited to send to the International Commission their opinions regarding a new batch of recommendations. The most recent recommendations are proposals made for changes in the International Rules for Zoological Nomenclature, but the proposals are so numerous that they cannot all be circulated, and zoologists must, if they so desire, consult many of them either in scientific journals in which they have appeared, or in manuscript at the office of any of the Commissioners. The circular issued by the Secretary to the Commission gives no hint as to the weight laid upon the opinions of zoological societies or private zoologists by the Commissioners who receive them, but the general impression made by the propositions for revisal is that there is a fairly widespread dissatisfaction with the rules as they stand or as they have been applied.

It is impossible even to indicate here all the suggestions that have been put forward for the revision of zoological nomenclature, but two of very general interest may be referred to. The proposal is made that the starting-point of zoological nomenclature should be the twelfth edition of Linnæus, and not the tenth edition as at present. In our opinion, the adoption of the tenth edition was a blunder, but whether it is possible now to undo the evils that have arisen from that false step and the acceptance of many papers printed in the transitional stage from 1758 to 1766 which it made necessary, is a question demanding the most careful consideration. A second proposition of great significance paves the way for a more strict definition of papers which may be accepted for purposes of priority in zoological nomenclature. It is essential that no dubiety should exist as to what constitutes acceptable 'publication', and that freak publications should be ruthlessly barred. If the recommendations here made have the effect of confining attention to genuine papers of scientific intention and import, they will help to clear the somewhat cloudy air of zoological naming.

IN view of complaints which we understand have been made by fishermen in Scotland regarding the damage caused to fishing gear and to food fishes by seals, the "Report on the Seals and Sea Lions of California", issued by the Californian Division of Fish and Game (1928), is of more than usual interest. The complaints made in California are similar to those made in Scotland: that the animals are very numerous, that they are increasing in numbers, and that they take enormous quantities of fish of economic value and cause considerable damage to gear. The very extensive investigation made by the Division of Fish and Game shows that the complaints are, to say the least, much exaggerated. The only satisfactory method of deciding the exact nature of the food is by examination of stomach contents, and this has shown that the food consists of great variety,

some of the animals containing only squids and octopods, while the great bulk of the food of the others consisted of coarse fish not used commercially. Of thirty-five seals examined in one instance, only two "contained food items in kind or quantity worth considering with respect to their direct bearing on the fishing industry". With regard to the damage to gear the evidence was also unsatisfactory, most of it being vague and circumstantial. The conclusion reached here was that although a certain amount of damage appears to be done to gear, it did not appear to be very extensive, and a good deal of the damage credited to sea-lions and seals may well have been caused by other creatures.

THE full scientific staff for the British, Australian, New Zealand Antarctic Research Expedition under the leadership of Sir Douglas Mawson has now been selected. Counting the leader the number will be 13, making with the master and crew of the *Discovery* a total of 40 souls. Dr. W. Wilson Ingram (Sydney) an 'old contemptible' with a distinguished war record, has been appointed medical officer. Mr. Marr, who has been on the *Discovery* in a former expedition, and Prof. Harvey Johnston, of the University of Adelaide, will be senior zoologists, assisted by Mr. H. O. Fletcher of the Australian Museum, Sydney, and Mr. Falla of New Zealand. The two latter will specialise in taxidermy. Mr. A. Howard, of the University of Melbourne, will be responsible for chemical work, and Mr. R. G. Simmers of the Meteorological Office, Wellington, New Zealand, for meteorological observations. Instructor Commander H. Moyes has been seconded by the Australian Navy to act as survey officer, while the Australian Air Force is providing two aviators in Pilot S. Campbell of H.M.A.S. *Albatross* and Sergeant Douglas of the Flying School, Point Cook. Petty Officer Williams has been appointed in England as echo-sounding and wireless expert, and Mr. Frank Hurley, well known for his work in the War zone, in the Antarctic, New Guinea, and elsewhere, will be official photographer and cinematographer. The master of the vessel is Captain J. K. Davis, and the crew has been selected almost entirely in England. The whole Expedition, therefore, is a fine example of British team work. Besides the contributing governments and the many firms which have donated gifts of food and clothing, Mr. MacPherson Robertson of Melbourne has made £10,000 available to meet the costs of the Expedition. It is anticipated that the *Discovery* will reach Cape Town early in October and take on board the contingent from Australia which will arrive in the s.s. *Nestor*. The vessel will then proceed to Kerguelen and, after coaling, sail to the Antarctic.

ON more than one occasion we have directed attention to the fine progress made by the museums of the United States in catering for the needs of youth. The Field Museum of Chicago, founded in 1893 by a donation of 1,000,000 dollars from Marshall Field, afterwards supplemented by a further 8,000,000

dollars bequeathed on his death, has always kept the interests of children in the foreground, and now publishes a pamphlet, "Field Museum and the Child", dealing with these activities. Free admission to the museum is granted to children and their teachers on all days, but this passive policy is supplemented by many extramural efforts. Portable exhibits, numbering 1000, on natural history and economic subjects, are sent into the class-rooms. Lecturers are sent to the schools to give illustrated talks on subjects studied by the children in their classes, and to direct attention to exhibits in the museum which further illustrate these subjects. Still other work of this nature is carried on within the museum building itself, and includes the direction of the child's explorations in the treasure house of knowledge, the correlation of museum studies with schoolroom work, and the supplementing of museum exhibits with lectures, moving pictures, and lantern slides. Attractive printed stories in souvenir form, based on the lectures and pictures, and on related material in the museum, are distributed to child visitors.

THE paragraphs in our issue of Aug. 17 (p. 274) on museum co-operation have brought a letter from Dr. Marie C. Stopes referring to the Portland Island Museum, of which she is honorary director. This museum is now being established on the island of Portland to preserve specimens of the biological and the palaeontological riches of the island, and also records of the island's history. The museum is already housed in the oldest cottage on the island, the freehold of this and some land adjacent having been given; the money for its restoration to its original appearance has been collected almost entirely by the islanders themselves, and the local urban district council has made the necessary arrangements to take over the Museum when complete. The Museum is badly in need of exhibition cases, and Dr. Stopes asks the authorities of the larger museums where wooden cases are being replaced by metal ones to bear in mind the needs of the Portland Island Museum.

The Empire Marketing Board has approved a capital grant not exceeding £30,000 to be devoted to research on Empire timbers at the Forest Products Research Laboratory at Princes' Risborough, under the Department of Scientific and Industrial Research. This grant arises out of a recommendation made by the Imperial Economic Committee in its report on timber, in which it was suggested that the marketing of Empire timbers might be considerably furthered if the Princes' Risborough station could be enlarged so as to include the testing of woods from the Dominions and Colonies as part of its normal routine. Although the Empire can supply an unrivalled variety of fine timbers suited to almost every purpose from its two million square miles of forest land, at present nine-tenths of our imported woods come from foreign sources. A lack of exact information concerning the technical qualities of the various Empire timbers and their potential uses is, it is felt, largely to blame for their restricted use and it is with the object of assisting to fill in this gap that the grant has been made. The

station will, when so enlarged, undertake the examination of new Empire timbers to obtain an indication of their possible uses. It will further test their seasoning characteristics, determine their strength values, carry out woodworking trials to ascertain their machining and finishing qualities, and, in general, carry out both routine and special work on woods from Empire sources. An Empire Timbers Committee is also being set up under the Department to advise the Princes' Risborough Laboratory on the priority to be given in the choice of timbers for test and in other calls on its services.

THE question of the standardisation of the voltage of supply for electric lighting and power is at present being seriously considered by electrical engineers. It is found that the householder hesitates to purchase domestic electric appliances, thinking that if he ever wants to change his neighbourhood the new pressure of supply will probably be different, and so the appliances he is thinking of purchasing would have to be scrapped. Some years ago, the British Electrical Standards Association (BESA) fixed the standard voltage of supply in Great Britain as 230, a voltage which was approved by the Electricity Commissioners. Unfortunately, the number of stations that supply at 230 volts is still in a minority, and the cost of changing over the pressure of supply of all the stations in the country would be greater than 20 million pounds. All kinds of pressures are in use, varying between 100 and 250 volts, but most of the stations supply at pressures not less than 200 volts. The lack of standardisation in the early days of the industry, when each consulting engineer paid little attention to the pressures already in use, is now beginning to hamper progress, and consumers supplied at freak voltages pay more for their lamps. Other nations have the same trouble. In a recent journey abroad we noted that the pressures of supply marked on the lamps in the bedrooms of the hotels at which we stayed were as follows: Chantilly, 250; Avignon, 210; Cavalière, 230; Aosta, 150; Locarno, 135; Geneva, 130; Troyes, 125; Le Touquet, 110; and at Calais the lamps were marked 125-130. Apparently, therefore, the need for standardising pressures is also urgent abroad.

A LEAFLET recently published describes the "Scientific and Technical Positions in the National Bureau of Standards of the United States" and how they are obtained (Washington, D.C., U.S. Government Printing Office). All positions on the staff are subject to the competitive requirements of the civil service regulations. Every candidate, therefore, must qualify through a civil service examination. Applicants, however, for higher grades are not subjected to a written examination, but are rated on their education, experience, and writings. They must be citizens of the United States. The advanced courses at the Bureau are accepted by several universities as credits towards a higher degree. Junior assistants are offered the opportunity of continuing their college work at local universities; in fact, employees in the lower grades are expected to prepare themselves by study for higher grade positions.

Educational facilities are also afforded by the weekly meetings of the staff, co-operative courses of study, and by lectures from visiting scientific workers. The salaries range from 600 dollars, that of a junior messenger, to 9000 dollars, which is the annual salary of the heads of the professional and administrative departments respectively. Stress is laid on the amenities of the site of the laboratory. The buildings are arranged like a university "on a natural hill amidst beautiful country surroundings" and only about $3\frac{1}{2}$ miles from the centre of Washington. To show how attractive the life is, the facilities for many outdoor sports, including polo and skating, are mentioned. We are told also that the Potomac River is much used for canoeing and swimming, and that its banks are suitable for camping and 'hiking'.

ACCORDING to the Report of the United States National Research Council for the year July 1927-June 1928, which forms part of the Report of the National Academy of Sciences for the same period, the expenses for the year were £170,000, 35 per cent of this being for the support of research fellows, 33 per cent for research in charge of committees of the Council, 13 per cent for research in charge of other organisations, and 19 per cent for general maintenance and charges. The funds for the fellows come from the Rockefeller Foundation and the General and International Education Boards, those for general maintenance from the Carnegie Corporation, and the rest from other sources outside the Council as set out in detail. The fellows number 18 in physics, 25 in chemistry, 15 in mathematics, 25 in medicine, 43 in biological sciences, and 49 in child development. The Report extends to 95 pages, and 20 pages of it are devoted to short accounts of the work done in each of these divisions and 4 pages to details of expenditure.

WE have received the annual programme of the Belfast Naturalists' Field Club, together with some additional information, and have been impressed by the liveliness of this field club, which has celebrated its sixty-seventh session by electing its first lady president, Miss W. J. Sayers, and by reaching a membership of one hundred in its well-conducted Junior Section. The total membership having reached 585, a limitation has been put upon the number of new members; the new rule provides for the election of twenty-five new members in each half-year and elections only at the two specified meetings. Although still a very long way from the 180,000 membership of the Gesellschaft der Naturfreunde in Stuttgart, the Belfast Field Club appears to be one of the most active naturalists' clubs in the British Isles.

THE Gorgas Memorial Institute of Tropical and Preventive Medicine, initiated in memory of General Gorgas, who did so much for the eradication of yellow fever in Cuba and Panama, is now in operation. The object of the Institute is to conduct an intensive campaign against unnecessary sickness and premature death, and to carry on research in tropical diseases at the Gorgas Memorial Laboratory established in Panama. The United States Congress has voted 50,000 dollars annually for maintenance, and it is

expected that the countries of Latin America will also contribute.

THE Minister of Health having considered the report of a Committee appointed to inquire into vaccination in Great Britain, has decided to amend the Vaccination Orders so as to give effect to some of the recommendations, which are briefly as follows: (1) In place of the officially advocated four insertions, trial to be made of vaccination and re-vaccination in one insertion, with a minimum of scarification; (2) primary vaccination to be performed in infancy as at present, and re-vaccination to be offered at school-entering and school-leaving ages; (3) vaccination in multiple insertions to be still available for persons who may desire it; and (4) in public vaccination, if after-treatment be required as a consequence, it is the duty of the public vaccinator to provide such attention without cost to the parents. (Ministry of Health: Circular 1025a, and "Statutory Rules and Orders", 1929, No. 640, London: H.M. Stationery Office.) The new order comes into operation on Oct. 1.

THE Secretary of State for Scotland and the Minister of Agriculture and Fisheries have appointed the following committee "to investigate the origin, predisposing causes, and mode of dissemination of furunculosis and similar infectious diseases among salmon, trout, and other freshwater fish in England and Scotland, and to conduct experiments with a view to ascertaining methods of combating the diseases": Prof. T. J. Mackie (chairman), Prof. J. A. Arkwright, Mr. T. E. Pryce-Tannatt, Mr. J. C. Mottram, Mr. Douglas Johnston, Mr. W. J. M. Menzies. The secretary of the Committee is Mr. William Martin, of the Fishery Board for Scotland, 101 George Street, Edinburgh, to whom communications should be addressed. A series of epizootics of furunculosis among salmon and trout in Great Britain in recent years has been sufficiently extensive to occasion considerable damage to valuable fisheries in the rivers affected. A smaller committee has already made preliminary investigations, and several reports have been issued on the scientific work which has been undertaken and on the specimens which have been taken in the areas of infection and examined. A most important result which has been established is that apparently healthy fish may act as carriers of furunculosis, and the relationship of this fact to the incidence and spread of the disease among home and imported fish will form one of the considerations to be investigated by the new Committee.

THE tenth Annual Report of the Ministry of Health, 1928-1929, has been issued. The subjects dealt with fall under the main heads of public health, local government and finance, administration of the Poor Law, and administration of National Health Insurance and Contributory Pensions. The report of the Chief Medical Officer of the Department is issued separately. The remarks on canal boats by the Inspector, Mr. Owen J. Llewellyn, are of some general interest. Few boats now make short journeys, and individually owned and worked boats are to-day the exception. Mr. Llewellyn's experience is that canal boat-people are solicitous for their children's welfare and look after

them properly; the schools are far better attended than once was the case, and parents and children are increasingly anxious to take advantage of them. He sees no reason why children and families should not live on the boats, and the decent, kindly, and healthy status of the boat-people as a whole is a proof that there can be little wrong with their mode of living.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A chief lecturer in pharmacy and an assistant lecturer in pharmacy at the Swansea Municipal Technical College—The Director of Education, Education Offices, Dynevor Place, Swansea (Sept. 3). An officer in the Mechanical Engineering Department and one in the Transportation (Power) Department of the Indian State Railways—The Secretary, Services and General Department, India Office, Whitehall, S.W.1 (Sept. 14). An assistant professor in mechanics and mathematics at the City and Guilds (Engineering) College—The Secretary to the Delegacy, City and Guilds (Engineering) College, Exhibition Road, S.W.7 (Sept. 30). A director of the Agricultural Research Institute, Pusa, India—

The Under Secretary of State, Economic and Overseas Department, India Office, Whitehall, S.W.1 (Nov. 29). An expert adviser in animal husbandry under the Government of India—The Under Secretary of State, Economic and Overseas Department, India Office, Whitehall, S.W.1 (Nov. 29). A junior scientific officer in the Admiralty Scientific Pool at the Experimental Establishment, Portsmouth—The Secretary of the Admiralty (C.E. Branch), Whitehall, S.W.1. A road engineer for the Public Works Department of the Government of Cyprus—The Crown Agents for the Colonies, 4 Millbank, S.W.1. A water engineer for the Public Works Department of the Government of the Tanganyika Territory—The Crown Agents for the Colonies, 4 Millbank, S.W.1. Teachers for evening instruction in chemistry and physics, mechanics, mechanics and heat, engineering calculations, and machine drawing at the Croydon Polytechnic—The Principal, Central Polytechnic, Scarbrook Road, Croydon. An assistant physicist under the Research Association of British Paint, Colour, and Varnish Manufacturers—The Director, Paint Research Station, Waldegrave Road, Teddington.

Our Astronomical Column.

Orbits of Neujmin's and Forbes's Comets, *b* 1929 and *c* 1929.—The following orbits have been computed of Neujmin's comet *b* 1929, and Forbes's comet *c* 1929. The equinox is 1929-0, *T* is in U.T. The second and third are parabolic orbits.

	Neujmin.	Neujmin.	Forbes.
I 1929	July 3-57	1929 April 16-64	1929 May 26-149
ω	144° 21' 73	116° 29'	234° 32'
Ω	157 17 64	154 29	29 34
<i>i</i>	3 56 57	5 9	5 37
ϕ	36 39 76	—	—
log <i>q</i>	0.32426	0.3312	0.18927
Period	11.983 years	—	—
Computer	M. Ebell Bower and Willis	H. E. Wood.	

The small inclination of Forbes's comet suggests that it may be periodic. The calculated position of this comet from Wood's elements for Aug. 3-75 is R.A. 20^h 53^m 40^s, S. Decl. 30° 26'. The position telegraphed for that date was 20^h 0^m 52^s, S. 30° 26'. The telegraphed R.A. appears to be in error.

Ephemerides for 0^h U.T. from the first and third orbits:

NEUJMIN'S COMET.					
	R.A.	S. Decl.	log <i>r</i> .	log Δ .	
Aug. 27.	21 ^h 8 ^m 2 ^s	14° 36'	0.3357	0.0732	
Sept. 2.	21 7 10	15 0	0.3382	0.0863	
8.	21 7 1	15 19	0.3410	0.1014	
14.	21 7 41	15 35	0.3441	0.1186	
20.	21 9 16	15 44	0.3474	0.1369	
FORBES'S COMET.					
	R.A.	S. Decl.	log <i>r</i> .	log Δ .	
Aug. 29.	20 ^h 54 ^m 6 ^s	27° 45'	0.3025	0.0258	
Sept. 2.	20 55 6	27 15	0.3097	0.0462	
6.	20 56 24	26 44	0.3172	0.0671	
10.	20 58 0	26 13	0.3244	0.0877	
14.	20 59 54	25 42	0.3312	0.1084	
18.	21 2 5	25 10	0.3382	0.1288	

It will be seen that the two comets are fairly near each other. Their magnitudes are about 14½ and 12 respectively.

The Puzzle of the Major Planets.—The above is the title of an article by Prof. H. N. Russell in the *Scientific American* for August. He refers to the change of view as to the condition of the four outer planets that

has taken place in recent years. It was previously believed by many astronomers that their low densities indicated high temperatures; but the radiometric measures at Flagstaff and Mount Wilson indicate that their outer layers are very cold, probably at least 100° C. below zero. The difficulty is to identify the gases forming these outer layers. We have the two clues of the rich and varied colours that are visible on the disc of Jupiter, and the series of bands in the spectrum which grow stronger in proportion to the distance from the sun, being weak in Jupiter's spectrum and very pronounced in that of Neptune. Menzel's suggestion that they are due to some compound or allotropic form which is stable only at very low temperatures, is mentioned with approval. The temperature of the outer layers may be presumed to decrease as the distance from the sun increases; this would account for the increasing prominence of the bands for the more distant planets. A suggestion by Prof. Moulton is quoted that the low density of the giant planets is due to their having retained great quantities of lighter materials which the smaller planets lost through their weaker gravitational attraction. It is natural to postulate the presence of large quantities of hydrogen and helium in their outer envelopes. The suggestion is also quoted that Jupiter and Saturn may be covered with frozen oceans 11,000 miles in depth. It is difficult to reconcile this hypothesis with the evidence for the presence of energetic action at great depths in their atmospheres, which is afforded by telescopic study of their discs.

Argon in the Solar Corona.—A suggestion was recently made by I. M. Freeman attributing many of the unidentified coronal lines to argon (see also NATURE, Jan. 19, p. 106). This theory is criticised by Prof. H. N. Russell and Dr. I. S. Bowen, who show, in the *Astrophysical Journal* (vol. 69, p. 196), that the number of coincidences is very little larger than might be expected from pure chance (within the wide limits of error allowed by Freeman). Also, discordances for some of the better-measured lines exceed the limits of observational error. It is concluded that "the attribution of the coronal lines to Argon is without foundation".