the antennæ and telson, he now adds the establishment of a hair formula for the endopodite of the two maxillæ and of the second maxillipede and of the joints of the latter, which he finds are constant for the species through all the zoeal stages. He has established nine groups of zoeas based on the form of the antennæ and telson by the aid of which any unknown zoea of any stage may be classified approximately, but the classification is admittedly not a natural one. For example, the group Inachizoea is typical for the Inachidæ, but also contains *Pilumnus*, *Heteropanope* and *Gonoplax*, whilst the group Grapsizoea, although one type is chiefly confined to the grapsoid crabs, contains another type in which are included many of the Portunidæ, also *Thia*, *Eriphia*, *Hyas* and *Maia*; nevertheless, with the further and more exact descriptions of the individual zoeas, one can get a very good idea of their probable position in a natural classification and comparing it with those the adults of which are known, many genera can already be identified.

The system of groups here given is to be regarded as a kind of key which is really helpful and a distinct step forward in the elucidation of the difficult brachyuran larvæ. Several zoeas are described and figured, none of which can be actually referred to any known species, but they are classified into these groups. It is possible, however, from the characters given to place them at least in the families if not in the genera to which they belong.

It is hoped that in the near future the author will produce a similar grouping for the megalopæ, which is much wanted.

University and Educational Intelligence

CAMBRIDGE.—Prof. Werner Heisenberg, of the University of Leipzig and Magdalen College, Oxford, has been appointed Rouse Ball lecturer for the year 1933–34.

At Queens' College, Prof. James B. Buxton, professor of animal pathology in the University, has been elected to a professorial fellowship.

LONDON.—The University is making a grant of £100 towards the fund for the purchase of the "Codex Sinaiticus".

A course of six lectures on cytology will be given at University College, Gower Street, London, W.C.1, on Wednesdays commencing on February 7, at 5 p.m. by Dr. R. J. Ludford, Dr. E. S. Horning and Dr. K. C. Richardson. The lectures are open to the public.

OXFORD.—On Tuesday, January 23, Congregation approved an amending Statute for defining more exactly the scope of the Hope professorship of zoology, by adding ("Entomology") to the designation of the professorship, and to the mention of "zoology" wherever it occurs in the statement of the professor's duties.

At the same meeting of Congregation, the Master of Balliol, in moving the preamble of a statute for extending and improving the provisions for the study of forestry in the University, directed attention to the fact that the clauses of the statute, if they were deemed unacceptable, were open to revision by amendment at a later stage. The same point was urged by Dr. N. V. Sidgwick. Prof. F. A. Lindemann, though refraining from opposing the passing of the preamble, thought that the statute in its present form provided no sufficient guarantee for ensuring the permanence of grants. The preamble was carried without a division.

Prof. W. G. Le Gros Clark, professor of anatomy at St. Thomas's Hospital Medical School, University of London, has been appointed Dr. Lee's professor of anatomy.

On Tuesday, January 30, Congregation approved the preamble of a statute establishing a statutory readership in physical anthropology. The Senior Proctor, Mr. H. G. Hanbury, of Lincoln College, explained that the duties of the post had been voluntarily undertaken by the former Lee's professor of anatomy; and that the present measure was called for in consequence of the recent retirement of Dr. Arthur Thomson from the professorship.

The honorary degree of M.A. was conferred on Miss Ethel Bellamy in recognition of her work at the University Observatory on the photographic chart of the heavens.

Science News a Century Ago

The King's Speech, 1834

February 4, 1834, saw the opening of Parliament, and amongst the items dealt with in the Speech from the Throne (Earl Grey, Prime Minister) was a mention of the Act passed in the previous session abolishing slavery under the British flag. Legislation dealing with the status and power of municipal corporations was forecast (but was not passed until 1835). The Speech lamented the continued distress amongst the proprietors and occupiers of land, and Parliament was recommended to give early consideration to such a final adjustment of the tithes as may extinguish all just causes of complaint. On the subject of Ireland the Speech contained the following passage: "But I have seen with feelings of deep regret and just indignation the continuance of attempts to excite the people of that country to demand a repeal of the legislative union".

Porcupine Men

During January 1834, a middle-aged man, of very athletic and robust form of body, completely covered with a green horny substance in the form of quills, not dissimilar to those which are produced on the porcupine, presented himself at the Westminster Hospital for exhibition. The parts which had escaped the deformity were his face, the palms of his hands and the soles of his feet; every other part of his person was abundantly supplied with this green horny substance. He stated that he shed his horns, or quills, annually, and a fresh crop succeeded.

A description of the case appears in the *London Medical and Surgical Journal* of February 6, 1834. The man was a member of the celebrated Lambert family, in which this remarkable condition, an extraordinarily scarce form of the skin disease named ichthyosis hystrix, was present in at least six generations. In every case the condition appeared about two months after birth and affected the males only. The case of the first member of the Lambert family to be affected was reported to the Royal Society on March 16, 1731, by John Machin, the secretary, and Prof. Gresh (*Phil. Trans.*, 38, 299; 1731) at fourteen years of age, and in 1755 at the age of thirty-eight with his son Edward by Baker

(*ibid.*, 49, 21; 1755). Edward and his two sons, who all presented a similar skin condition, visited Germany and France, where they were described under the name of "Porcupine Men" by Blumenbach, Autenrieth and Tilesius. Other members of the family similarly affected were afterwards described by Elliotson in 1831, Pettigrew in 1834 (in the subject of this note) and by Pickells in 1851. Further details concerning the Lambert family, including a reproduction of the figure published in 1802 by Tilesius, will be found in E. A. Cockayne's "Inherited Anomalies of the Skin and its Appendages" (1933), pp. 182–85, from which most of the above information is taken.

The Franklin Institute

At the beginning of the nineteenth century, Philadelphia was the centre of scientific culture in the United States. The American Philosophical Society had been founded in 1769, with Franklin as its first president, while in 1814 and 1824 respectively, the Academy of National Sciences of Philadelphia, and the Franklin Institute of Pennsylvania were inaugurated. The latter society had its birth at a meeting held in the County Court House on February 5, 1824, when it was resolved that "it is expedient to form a Society for the promotion of the useful arts in Philadelphia, by extending a knowledge of Mechanical Science to its members and others at a cheap rate". It was also resolved to attain this object by means of lectures, the formation of collections and of a library and the award of premiums for inventions. The Institute held its first public exhibition in October 1824, its first hall was erected in 1825, and the following year the *Franklin Journal* was established. Two years later this was renamed the *Journal of the Franklin Institute*, by which title it has since been known.

From the first the *Journal* contained original contributions, reprints from other periodicals, reports of committees and notices of American inventions. The annual report of the Board of Managers submitted in January 1834 was signed by Alex. Dallas Bache. At that time there were 1,659 members, and "the condition of the Institution was one well deserving mutual congratulations. From a small beginning, in an attempt to diffuse useful knowledge, to promote practical science and the mechanic arts, the institution had grown to be respected by her members and the public". The report refers to courses of lectures by Prof. J. K. Mitchell on chemistry, by Prof. W. R. Johnson on natural philosophy and by Gouverneur Emerson, M.D., on meteorology. Thanks were expressed to these lecturers and also "to J. Millington, Esq., late Professor of Natural Philosophy in the Royal Institution of London who is engaged on a most able series of lectures on astronomy". The society at that time was investigating the principles of water wheels, inquiring into the causes of the numerous explosion of boilers in American steam-boats, and the *Journal* for 1833 and 1834 contains reports of various individuals into the system of weights and measures of the United States, England and France. Its important work in this direction was recognised by the Pennsylvanian Government, and on the instructions of the House of Representatives the secretary of the Commonwealth had forwarded to the Institute a draft of a bill relating to weights and measures for its consideration.

Societies and Academies

LONDON

Royal Society, January 25. A. ZOOND and J. EYRE. Studies in reptilian colour response. (1) The bionomics and physiology of the pigmentary activity of the chameleon. In strong diffuse daylight chameleons become dark on a black background and pale on a white one. Blind animals darken in the light. This response depends upon the integrity of spinal reflex arcs. The time relations of these responses have been determined. The threshold for the retinal photoreceptors is lower than for the dermal ones. In weak light the white background response is reversed, the animals becoming dark. Low temperatures above 0° C. have no effect upon the normal response of chameleons to darkness. A theory of nervous co-ordination is developed. It is suggested that the 'daily rhythm' of colour changes may be interpreted in terms of the white background response in strong and weak light, without reference to temperature. A. WOLSKY and J. S. HUXLEY: The structure and development of normal and mutant eyes in *Gammarus chevreuxi*. The eyes of 'eye-colour mutants' ('red', 'no-white', etc.) differ from normals only in pigmentation and not in structure. The eyes of eye-structure' mutants ('albino', 'colourless') are markedly deficient as compared with normal. For the development of normal eyes, the results of Schatz (1929) are confirmed. The differentiation and growth of the optic tract (not previously studied in *Gammarus*) is centrifugal in time: the medulla externa and lamina ganglionaris are at first small, but eventually constitute a large and distinct protuberance. In the eye-structure mutants the adult optic tract is comparable with the early embryonic stage of normals. The structure of albino and colourless eyes can be formally explained in terms of (*a*) a rate-gene causing a delay in differentiation of the organs (optic tract and eye-mass) derived from the primary optic disc; (*b*) a graded distribution of the inhibitory effect caused by this delay; and (*c*) possibly, the consequent absence of a formative stimulus normally exerted by the optic tract upon the differentiation of the eye proper. J. NEEDHAM, C. H. WADDINGTON, and DOROTHY M. NEEDHAM: Physico-chemical experiments on the amphibian organiser. The induction of a secondary embryonic axis in amphibian gastrulæ can be accomplished by the implantation of (*a*) cell-free extracts of the neurula, (*b*) ether and petrol-ether extracts of the neurula, (*c*) adult amphibian tissues, (*d*) ether extracts of adult amphibian viscera. A distinction is made between two factors in induction; the production of an embryonic axis as such, which is called evocation; and the determination of the regional, for example, antero-posterior, character of that axis, which is called individuation. The evocator is probably a definite chemical substance soluble in ether and petrol-ether.

PARIS

Academy of Sciences, December 18[1] (*C.R.*, 197, 1545–1705). LOUIS CARTAN: The displacement in an electrostatic field of magneto-electronic spirals. N. THON: The direct determination of the number of active centres on a crystalline metallic cathode. E. GUILLERMET: The electrolysis of cupric chloride in methyl alcohol solution. The primary reaction appears to be production of cuprous chloride and chlorine. R. DE MALLEMANN and H. COURTILLOT: Elliptical