Growth and Division in Specialised Tissues.—Interesting data are afforded by A. Cohen and N. J. Berrill (*J. Morph.*, December 1936, **60**, No. 1, 243) on the methods of growth and division in specialised tissues in vertebrates. In the notochord for instance, it is only the non-vacuolated cells at the posterior tip and the periphery that divide. Vacuolated cells never divide. In the retina it is only the non-specialised cells occurring at the periphery that undergo division. The specialisation which progresses from the periphery to the centre marks the end of all cell division. The cells of the gut epithelium also divide by mitosis but during division a round shape is assumed by the cells and all functional activity stops. Fully formed cartilage cells divide both by mitosis as well as amitosis. It is concluded that the ability of functional cartilage cells and cells of the gut epithelium to divide is due to their comparatively simple structural differentiation as opposed to notochordal and retinal cells where specialisation has been carried so far that division is impossible.

SCIENCE NOTES.

Royal Asiatic Society of Bengal.—At the ordinary monthly meeting, held on the 4th January, an important contribution on *the Alimentary Canal of* Epilachna Indica (*Coccinellidæ : Coleoptera*), *with a discussion on the Activities of the Mid-gut Epithelium*, was read by S. Pradhan.—'On a comparative study of the alimentary canals of carnivorous and herbivorous beetles of the family Coccinellidæ (Coleoptera), it was seen that there were a large number of both structural and physiological peculiarities in the case of *Epilachna Indica* which are important from the view-point of digestion among insects in general. The alimentary canal of another species of *Epilachna*, *i.e.*, *E. Corrupta*, has already been described by two American workers, Potts (1927) and Burgess (1932), but their accounts have differed from each other. In this paper the author has presented the results of his investigations on *E. Indica*."

At the same meeting Messrs. Narendra Chandra Vedantatirtha (*Calcutta*) and Maulvi Shamsuddin Ahmad (*Calcutta*), were balloted for as ordinary members.

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The Second Annual Meeting of the Indian Academy of Sciences, was held on the 11th, 12th and 13th January 1937, Rajasabhabhushana Sir C. V. Raman, Kt., F.R.S., N.L., presiding. The Inaugural ceremony was held at Sir Puttannachetty Town Hall on the 11th, when Mr. S. G. Forbes delivered an address. Two public lectures were arranged during the session one on the 11th by Sir C. V. Raman on 'Recent Advances in Astronomy and Astrophysics' (illustrated by lantern slides) and the other on the 12th by Prof. K. S. Krishnan on 'The Approach to the Absolute Zero of Temperature'.

Thirty papers under Section A and seven under Section B, were communicated for the Scientific meeting.

A visit was arranged on the 13th instant to the Tobacco Factory, Cleveland Town. The visitors were shown round by the management, and the several processes from the tobacco to the finished product ready for the market, were explained.

The following scientists have been elected Honorary Fellows of the Academy.

(1) Prof. Max Born; (2) Sir Henry Dale; (3) Dr. Irving Langmuir; (4) Prof. P. Niggli; (5) Prof. R. W. Wood.

British Association.—The Annual Meeting of the British Association will be held next year in Nottingham on September 1–8 under the presidency of Sir Edward Poulton. The following sectional presidents have been appointed.—Section A (Mathematical and Physical Sciences), Dr. G. W. C. Kaye; B (Chemistry), Dr. F. L. Pyman; C (Geology), Prof. L. J. Wills; D (Zoology), Prof. F. A. E. Crew; E (Geography), Prof. C. B. Fawcett; F (Economics), Prof. P. Sargant Florence; G (Engineering), Sir Alexander Gibb; H (Anthropology), Dr. J. H. Hutton; I (Physiology), Dr. E. P. Poulton; J (Psychology), Dr. Mary Collins; K (Botany), Prof. E. J. Salisbury; L (Education), Mr. H. G. Wells; M (Agriculture), Mr. J. M. Caie.—*Nature*, **138**, No. 3502, 1004.

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The Effect of Annealing Procedure on the Tensile Properties of Arsenical Copper Bar. By E. F. G. Gilmore.—(*Bulletins of Indian Industrial Research*, 1936, No. 3).—This paper gives the results obtained in a series of tests carried out with a view to ascertain the effects of (*a*) annealing temperature and conditions, (*b*) period of annealing under constant conditions, (*c*) size of test pieces, upon the tensile properties.

A short description is given of the construction of the annealing furnace through which either steam or nitrogen could be passed continuously. The preparation of the test pieces and their characteristics are also described.

It was found that constant conditions of annealing were obtained by heating for not less than 60 minutes at 750° and for 120 minutes at 650°. Longer periods of annealing had no effect on the process. Further, the properties of the specimens annealed at the lower temperature were more satisfactory. No differences in the tenslie stress were observed in the experiments employing steam or nitrogen, but the specimens heated in steam remained comparatively bright while those heated in nitrogen were tarnished a dull brown. The steam method is therefore recommended for general practice. K. R. K.

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Report of the Forest Products Research Board for the year 1935. (His Majesty's Stationery Office. Price 2*s*.)—The work described includes investigations on the physical, seasoning and fire-resistant properties and the working qualities of timbers, both home-grown and

imported, as well as on their chemical composition, durability and preservative treatment. The value of the work can be gauged by the increasing use made of it by industry, which is also described in the *Report*. The *Report* cannot fail to be of interest to all those concerned in any form with timber.

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Lightweight Concrete Aggregates.—(His Majesty's Stationery Office. Price 4*d*.)—There is a considerable demand for lightweight concrete aggregates in building. This Bulletin describes the various materials—pumice, furnace clinker, coke breeze, lightweight slag, expanded clays, shales and slate—that are at present available for this purpose. The properties of the concretes made with these aggregates are indicated, and recommendations are given with regard to special points to be considered in specifying concrete mixes of lightweight aggregates for various uses.

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Corrosion of the Tin-Plate Container by Food Products.—(His Majesty's Stationery Office. Price 1*s*.)—The corrosion of the tin-plate container by food products is still the basic problem of the canning industry.

Considerable practical progress has been made since 1931, and it now seems likely that the problem will eventually be solved by the improvement of lacquers and methods of lacquering; but this is not yet certain. It is therefore hoped that this second report, which describes experiments that throw further light on the factors involved in the corrosion of tin-plate and discusses the application of the results in commercial practice, will be of assistance to the industry. It is also hoped that it may be of interest to those who are concerned with the wider problem of corrosion in general.

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Under the auspices of the National Geographic Society and the Smithsonian Institution, an expedition bound for the Jungles of Sumatra, has been organised to "bring back alive" wild animals of the "*Far East*" and to collect geographic and natural history information and photographs. The animals brought back will go to enrich the collection in Washington's famous Zoo. Dr. William M. Mann, Director of the National Zoological Park, will lead the expedition.

Accompanying Dr. Mann will be Mrs. Mann; a member of the National Geographic Society's photographic staff, and Roy Jenier and Malcolm Davis of the Zoo staff. The party will sail from Seattle, and after brief pauses in Japan, the Philippines and Singapore, will establish headquarters at some place on the Netherlands island of Sumatra, near the sea and in easy reach of "wild country". In the expedition's baggage will be a number of special "mercy traps" and a few special cases in which to carry small, delicate creatures. The heavy traps and cages needed for the larger jungle beast will be built in the field.

The region to be visited is at present only poorly represented by animals in the National Zoological Park. Dr. Mann feels, he will confer with game officials and naturalists in the countries to be visited, and will collect whatever he can of the missing specimens. Mammals, reptiles, birds, and a few fishes will be the primary objects of the collectors, but in spare time, Dr. Mann hopes also to collect insects and even a few botanical specimens.

After the work is completed in Sumatra, the expedition expects to visit the Netherlands island of Ceram, almost 2,000 miles to the east, and possibly some of the East Indies islands not under Netherlands Jurisdiction. Before starting home, the party will also visit Bangkok, Siam.

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Announcements.

Journal of the Bombay Natural History Society.—The Honorary Secretary announces that with effect from 1st January 1937, a uniform rate of Rs. 5 per copy has been fixed for all back numbers of the Journal from Vol. I to Vol. 35 inclusive. Intending purchasers may apply to the Honorary Secretary, Bombay Natural History Society, 6, Appollo Street, Bombay (India).

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Under the chairmanship of Gustave Fassin, of the Bausch and Lomb Scientific Bureau, Rochester, New York, a committee has been appointed to secure and arrange exhibits for the first **International Exhibition of Applied and Scientific Photography** ever held in the United States.

According to plans revealed by Mr. Fassin and Rowland S. Potter, National Chairman of the Scientific and Technical Section of the *Photographic Society of America* and President of the local section of the Society, which is sponsoring the exhibition, the exhibition will be held in the Rundell Memorial Building at Rochester, New York, in March 1937. This new and beautiful civic building has exceptional facilities for showing both pictures and apparatus.

Scientists all over the world are being contacted in an endeavour to make the exhibition fully representative of the many fields of applied and scientific photography. Scientists in any of the following fields are invited to send exhibits to the heads of the sections listed below, or to C. B. Neblette, Secretary of the Scientific Section at Rochester, who will supply entry blanks.

Dr. Walter Clark—Astronomy, meteorology, light sensitive substances.

Mr. Gustave Fassin—Photomicrography, microphotography, metallography.

Dr. Brian O'Brien and Dr. Walter Clark—X-Ray Spectrography.

Dr. T. R. Wilkins—Cosmic ray photography and theoretical physics.

Mr. C. B. Neblette—Press photography.

Mr. Glenn Matthews—High speed photography.

Mr. Rowland S. Potter and Mr. John W. McFarlane—Technique of color photography.

Mr. John W. McFarlane—Photography by invisible radiation.

Mr. Glenn Matthews—Aerial photography.

Secretary, C. B. NEBLETTE, F. R. P. S., *Rochester Athenæum and Mechanics Institute, Rochester, New York.*

We acknowledge with thanks receipt of the following :—

"The Agricultural Gazette of New South Wales." Vol. XLVII, No. 12, December 1936.

"Indian Journal of Agricultural Science," Vol. VI, Part V, October 1936.

"Monthly Bulletin of Agricultural Science and Practice," Vol. 27, No. 10, October 1936.

"Journal of Agriculture and Livestock in India," Vol. VI, Part VI, November 1936.

"The Philippine Agriculturist," Vol. XXV, No. 7, December 1936.

"Journal of the Royal Society of Arts," Vol. LXXXIV, Nos. 4383–4388.

"The Calcutta Review," Vol. 61, No. 3, December 1936.

"Chemical Age," Vol. 35, Nos. 908–912.

"Journal of Chemical Physics," Vol. 4, No. 12, December 1936.

"Berichte der Deutschen Chemischen Gesellschaft," Vol. 69, No. 12,

"Russian Journal of General Chemistry," Vol. VI, No. 9.

"Journal de Chimie Physique," Vol. 33, No. 11.

"Experimental Station Record," Vol. 75, No. 5, November 1936.

"Transactions of the Faraday Society," Vol. XXXII, Part 12, December 1936.

"Indian Forester," Vol. LXIII, No. 1, January 1937.

"Indian Forest Records," Vol. II, No. 1, Entomology : A Survey of the Damage to Teak Timber by the Beehole Borer, throughout the Main Teak-bearing Forests of Burma.

"Forschungen und Fortschritte," Vol. 12, Nos. 34, 35/36.

Government of India Publications :—

"Monthly statistics of production of certain selected industries of India" (Department of Commercial Intelligence and Statistics). No. 6, September 1936.

"The New Statistical Tables Based upon Fisher's t." By M. Vaidyanathan, Bulletin No. 13.

"Indian Trade Journal," Vol. CXXXIII, Nos. 1590–1594.

"Annual Report of the Public Health Commissioner for 1934," with the Government of India Vol. I.

"Marriage Hygiene," Vol. III, No. 2, November 1936.

"Scripta Mathematica," Vol. IV, No. 2, April 1936.

"Journal of the Indian Mathematical Society," Vol. II, No. 4, 1936.

"The Calcutta Medical Journal," Vol. 31, No. 6, December 1936.

"Medico-Surgical Suggestions," Vol. 5, No. 12, December 1936.

"Review of Applied Mycology," Vol. 15, No. 11, November 1936.

"Carnegie Institution of Washington, News Service Bulletin," Vol. IV, No. 9.

"Report of the Fuel Research Board for the year ended 31st March 1936."

"Annual Report on the Working of the Tea Districts Emigrant Labour Act (XXII of 1932) for the year ending 30th September 1935."

"Agriculture and Animal Husbandry in India", 1933–34 and 1934–35, Part I, 'Crop Production.'

"Zoologisch Botanischen Gesellschaft in Wien", Bands—LXXIII, LXXIV/LXXV, LXXVI, Hefts 1–4, LXXVII, Hefts 1–4, LXXVIII, Hefts 1–4, LXXIX, Hefts 1–4, LXXX, Hefts 3–4, LXXXI, Hefts 1–4, LXXXII, Hefts 1–4, LXXXIII, Hefts 1–4, LXXXIV, Hefts 1–4.

"Journal of the Bombay Natural History Society," Vol. 39, No. 1.

"Nature," Vol. 138, Nos. 3499–3503.

"Journal of Nutrition," Vol. 12, No. 5, November 1936.

"Canadian Journal of Research," Vol. 14, Nos. 10 and 11.

"Science and Culture," Vol. II, Nos. 6 and 7.

"Lingnan Science Journal," Vol. 15, No. 4, November 1936.

"Scientific American," Vol. 155, No. 6; Vol. 156, No. 1.

Catalogues:

"Monthly list of books on Natural History and Science," December 1936. (Messrs. Wheldon and Wesley, Ltd., London.)

ACADEMIES AND SOCIETIES.

Indian Academy of Sciences:

December 1936. SECTION A.—M. BORN AND N. S. N. NATH : *The Neutrino Theory of Light.—II.* CH. V. JOGA RAO : *An Optical Investigation of Some Indian Oils. III.—Intensity of the Scattered Light.*—The light scattered by the the oils has a a genuine molecular origin, and is subject to the usual laws of molecular scattering in dense media. H. GUPTA : *On a Conjecture of Ramanujan.* P. SURYAPRAKASA RAO AND T. R. SESHADRI : *Reactivity of the Double Bonds in Coumarins and Related a-β Unsaturated Carbonyl Compounds. Part III.—Action of Mercuric Acetate on Coumarinic and Coumaric Acids and Esters.* M. K. PARANJPE : *The Convection and Variation of Temperature near to a Hot Surface. Part II. Applications of Interferometry to the Measurements of Temperatures and Temperature Gradients Very close to a Hot Surface.*—Details of method and various precautions to be taken are discussed. S. CHOWLA : *On a Relation between Two Conjectures of the Theory of Numbers.* I. CHOWLA : *The Number of Solutions of a Congruence in Two Variables.* S. RAMA SWAMY : *The Structure of Thin Metallic Films.*—The structures have been studied by electron diffraction, and evidence has been obtained for the existence of gold and silver in the amorphous state. R. S. KRISHNAN : *X-Ray Diffraction and Electrolytic Dissociation.—Sulphuric Acid and Sulphates.* The change in the character of the halo with progressive dilution of pure sulphuric acid is followed. B. Y. OKE : *Lattice-Theory of Alkaline Earth Carbonates. Part IV.—Elasticity Constants of Calcite.* K. L. RAMASWAMY : *Refractive Indices and Dispersions of Gases and Vapours. Substituted Methanes and Ethane, Cyclopropane, Ethylene Oxide, and Benzene.* M. A. GOVINDA RAU : *The Dipole Moment and Structure of Pyrones.—2.6 Dimethyl-*