

ing.—Dr. J. B. Cleland and E. Cheel: Records of Australian fungi, No. 1.—R. J. Tillyard: Further researches upon the problems of the radial and zygoterid sectors in the wings of Odonata, and upon the formation of bridges. In studying the tracheation of the rare larva of *Neosticta* (Protoneurinæ), the structure of the zygoterid sector (Ms) was found to be normal. But occasionally a peculiar abnormality occurs in one wing, trachea M₃ becoming hitched on to Ms near its base, while the supervening imaginal venation remains normal, so that the base of M₃ appears on the larval wing as a true bridge. This suggests that bridges in general are not cœnogenetic developments in the venation, as held by Needham, but that they are the archaic condition, from which the tracheation has departed by specialisation. The question of the homology between Rs in Anisoptera and Ms in Zygoptera is dealt with by a complete marshalling of all the known evidence, both structural and ontogenetic. This is shown to be absolutely against the supposed homology. As a more probable explanation, the author suggests that the presence of two oblique veins in the archaic Petalurinæ and Cordulegastriinæ indicates the presence of both Ms and Rs in these forms, but that the Zygoptera, as a whole, have lost Rs by suppression at the subnodus, while all the rest of the Anisoptera only retain Ms as the bridge-vein basally, the more distal portion having become fused with Rs.

BOOKS RECEIVED.

- How We Learn. By W. H. S. Jones. Pp. vii+64. (Cambridge: At the University Press.) 1s. 6d.
- Nature Study Lessons seasonably Arranged. By J. B. Philip. Pp. ix+147. (Cambridge: At the University Press.) 2s. 6d. net.
- Elementary Physics for Engineers. By J. Paley Yorke. Pp. viii+165. (Cambridge: At the University Press.) 4s. net.
- Annuaire pour l'an 1917 publié par le Bureau des Longitudes. Avec des Notices Scientifiques. (Paris: Gauthier-Villars et Cie.) 2 francs net.
- The Mythology of All Races. Oceanic. By Prof. R. B. Dixon. Pp. xv+364+plates xxiii and map. (Boston, Mass.: Marshall Jones Co.)
- The Problem of Pain in Nature. By C. F. Newall. Pp. 131+7 illustrations. (Paisley: A. Gardner.) 3s. 6d. net.
- Science in the School. By Sir Clifford Allbutt. Pp. 20. (Cambridge: W. Heffer and Sons, Ltd.) 6d. net.

DIARY OF SOCIETIES.

THURSDAY, FEBRUARY 8.

- ROYAL SOCIETY, at 4.30.—The Dynamics of Revolving Fluids: Lord Rayleigh.—Deflection of the Vertical by Tidal Loading of the Earth's Surface: Prof. H. Lamb.—Spontaneous Generation of Heat in Recently Hardened Steel: C. F. Bruh and Sir R. Hadfield.
- ROYAL INSTITUTION, at 3.—The Mechanism of Chemical Change: Prof. F. G. Donnan.
- INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Frequency Changers: R. Townend.
- OPTICAL SOCIETY, at 7.30.—Annual Meeting.—More Notes on Glass Grinding and Polishing: J. W. French.

FRIDAY, FEBRUARY 9.

- ROYAL INSTITUTION, at 5.30.—Experimental Phonetics and its Utility to the Linguist: D. Jones.
- ROYAL ASTRONOMICAL SOCIETY, at 5.—Anniversary Meeting.
- MALACOLOGICAL SOCIETY, at 7.—Annual Meeting. Presidential Address: Systematic List of the Marginellidæ: J. R. le B. Tomlin.
- PHYSICAL SOCIETY, at 5.—A Special Test on the Gravitation Temperature Effect: Dr. P. E. Shaw and C. Hayes.—To Measure Pressure in a High Vacuum by Observation of Logarithmic Decrement: Dr. P. E. Shaw.—Note on the Calculation of the Coefficient of Diffusion of a Salt at a Definite Concentration: Dr. A. Griffiths.

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SATURDAY, FEBRUARY 10.

- CERAMIC SOCIETY, at 7.—Acid and Basic Furnace Lining.
- MONDAY, FEBRUARY 12
- ROYAL SOCIETY OF ARTS, at 4.30.—Town Planning and Civic Architecture: Prof. A. Beresford Pite.
- TUESDAY, FEBRUARY 13.
- ROYAL INSTITUTION, at 3.—Pain and its Nervous Basis: Prof. C. S. Sherrington.
- WEDNESDAY, FEBRUARY 14.
- ROYAL SOCIETY OF ARTS, at 4.30.—Highways and Footpaths: Lawrence Chubb.
- THURSDAY, FEBRUARY 15.
- ROYAL SOCIETY, at 4.30.—*Probable Papers*: Structure and Development of the Tubular Enamel of the Sparidæ and Labridæ: Dr. J. H. Mumery.—(1) Distribution in Wheat, Rice and Maize Grains of the Substance the Deficiency of which in a Diet causes Polyneuritis in Birds and Beri-beri in Man. (2) Effect of Exposure to Temperature at or above 100°C upon the Substance (Vitamin) whose Deficiency in a Diet causes Polyneuritis in Birds and Beri-beri in Man: Harriette Chick and E. M. Hume.
- ROYAL INSTITUTION, at 3.—The Mechanism of Chemical Change: Prof. F. G. Donnan.
- SOCIETY OF GLASS TECHNOLOGY, at the University, Western Bank Sheffield, at 4.30.—The Annealing of Glass: F. Twyman.
- ROYAL SOCIETY OF ARTS, at 4.30.
- INSTITUTION OF MINING AND METALLURGY, at 5.30.—The Wet Assay of Tin Concentrate: H. W. Hutchin.—Hydraulic Tin Mining in Swaziland: J. Jervis Garrard.
- FRIDAY, FEBRUARY 16.
- ROYAL INSTITUTION, at 5.30.—Authors' Dedications in the Seventeenth Century: The Dean of Durham.
- INSTITUTION OF MECHANICAL ENGINEERS, at 6.—Annual General Meeting.
- GEOLOGICAL SOCIETY, at 3.—Annual General Meeting.
- SATURDAY, FEBRUARY 17.
- ROYAL INSTITUTION, at 3.—The Mystery of Counterpoint: Dr. H. Walford Davies.

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