

Plants of the Scottish Lower Carboniferous

Transactions of the Royal Society of Edinburgh, 66, No. 1: "On the Structure of Some Petioles Associated with *Rhetinangium* Gordon" represents one of a series by Mr. A. G. Long on the plants of the Scottish Lower Carboniferous (Pp. 8 + 2 plates. Edinburgh: The Royal Society of Edinburgh, 1964. 6s.). We formerly knew very little about plants of this age, but now, thanks as much to Long as anyone, we have something like half knowledge of a considerable number, and very strange some of these plants are. In this paper, Mr. Long describes some petioles and petiole branches as a new species, but he thinks they belong to the stem *Rhetinangium* described fifty years ago. What is perhaps of more significance, he finds that the peculiar seeds *Genomosperma* are repeatedly associated with the petiole fragments. Thus, something approaching a whole plant begins to emerge, though still obscure and indeed insecure. Even such a synthesis is very remarkable with the infrequent and scattered fragments that constitute this flora.

Orientation of Stone Monuments and Buildings of Antiquity in the Near East

RECENTLY it has been suggested that many of the great stone monuments and buildings of antiquity were erected as calendars, being carefully orientated in respect to the Moon or some other heavenly body. A study of certain *Ziggurats* by G. Charrière, in the near east, would appear to confirm this suggestion (*Revue D'Assyriologie et Archéologie Orientale*, "L'Orientation de Quelques Ziggurats et Sanctuaires du Moyen-Orient" RA 58—1964). The article in question gives a detailed account of a number of examples such as the Moon palace of Sargon, the Ziggurat of Ur and certain Egyptian sanctuaries. Among an agricultural people the relationship between the calendar and religion is necessarily close, and this is often reflected in the orientation of their monuments.

Perkin Centenary Awards, 1965–1966

APPLICATIONS for the award of Perkin Centenary scholarships are invited by the Perkin Centenary Trust. Awards, tenable for one or two years and renewable for a further year at the discretion of the Trustees, are offered to candidates employed in an industrial firm or other institution concerned with the manufacture or the application of colouring matter, for study at a university or technical college. Two types of award are available, some to the value of £100, which are to be used in conjunction with a local education authority grant, and others to a value of £400, which are intended for students whose normal grant, inclusive of fees, would be less than about £300. Perkin travel grants are also available to teachers concerned with the study of any aspect of the manufacture or the application of colouring matter. Applications for the scholarships must be made by May 1, 1965, and for the travel grants by December 1, 1964. Further information can be obtained from the Secretary, Perkin Centenary Trust, c/o The Chemical Society, Burlington House, London, W.1.

The Night Sky in November

NEW moon occurs on Nov. 4d 07h 17m U.T. and full moon on Nov. 19d 15h 43m. The following conjunctions with the Moon occur: Nov. 13d 02h, Saturn 3° N.; Nov. 19d 04h, Jupiter 2° N.; Nov. 26d 16h, Mars 3° S. Mars is in conjunction with Regulus on Nov. 4d 01h, Mars being 1.3° N., Mercury with Antares on Nov. 14d 12h, Mercury being 2° N., and Venus with Spica on Nov. 18d 08h, Venus being 4° N. Mercury is too close to the Sun for observation. Venus is a morning star, rising at 3h 15m, 3h 55m and 4h 45m on November 1, 15 and 30, respectively. Its stellar magnitude is -3.5; its distance from the Earth increases during the month from 108 to 125

million miles and the visible portion of the apparent disk from 0.765 to 0.848. Mars rises at 0h 05m, 23h 50m and 23h 30m at the beginning, middle and end of the month, respectively. Its stellar magnitude is +1.2 and its distance from the Earth on November 15 is 140 million miles. Mars is in Leo throughout the month. Jupiter is above the horizon virtually all night, rising at sunset on November 12. Its motion is now retrograde near the boundary between Taurus and Aries, it is in opposition on November 13, its stellar magnitude is -2.4, and its distance from the Earth at opposition is 372 million miles. Saturn sets at 0h 15m, 23h 20m and 22h 20m on November 1, 15 and 30, respectively. It is stationary in Aquarius on November 2, after which it resumes its eastwards motion among the stars. Its stellar magnitude is +1.0 and its distance from the Earth on November 15 is 895 million miles. Occultations by the Moon of stars brighter than magnitude 6 are as follows, observations being made at Greenwich: Nov. 9d 16h 46.9m, ψ Sgr. *m.(D)*; Nov. 18d 01h 41.2m, ξ^1 Cet. (*D*); Nov. 20d 21h 53.0m, ι Tau. (*R*); Nov. 21d 05h 21.5m, 109 Tau. (*R*); Nov. 21d 19h 20.6m, 1 Gem. (*D*); Nov. 21d 20h 11.0m, 1 Gem. (*R*). An occultation by Mars of *B.D.* +19° 1559 (mag. 7.4) has been predicted, Nov. 23d 03h 36m (*D*), Nov. 23d 03h 41m (*R*). *D* and *R* refer to disappearance and reappearance, respectively. The Taurid meteors are active during October 26–November 16, with maximum between November 1 and November 9. The radiant is near R.A. 3h 36m, Dec. +14°, and conditions for observation are favourable. The Leonid meteors are active during November 14–17, with maximum on November 16. The radiant is near R.A. 10h 08m, Dec. +22°, and conditions for observation are favourable.

Announcements

PROF. M. G. KENDALL has been elected president of the Institute of Statisticians in succession to the late Lord Beveridge, who was founder president of the Institute. Mr. R. Brech, formerly honorary secretary, has been elected chairman in succession to Prof. G. A. Barnard, who retired at the end of his term of office. Mr. F. D. K. Liddell has been elected honorary secretary.

MR. AUSTIN BOURKE, assistant director of the Irish Meteorological Service, has been appointed director of the Irish Meteorological Service in succession to the late Dr. M. Doport (see p. 329 of this issue of *Nature*). Mr. Bourke is at present vice-president of the International Society of Biometeorology.

A SYMPOSIUM on pulse radiolysis will be held in Manchester, jointly by the Department of Chemistry of the University and the Paterson Laboratories, Christie Hospital and Holt Radium Institute, during April 21–23, 1965, immediately preceding the Miller Conference. Further information can be obtained from Dr. M. Ebert, Paterson Laboratories, Christie Hospital and Holt Radium Institute, Withington, Manchester 20.

THE following Acorn Meetings are to be held at the Arthur D. Little Research Institute: "The Interaction of Slow Electrons with Molecules" (November 16); "Organometallic Research in Industry" (December 7); "The Sleeping Brain" (January 11, 1965); "Solar Radiation—A Meteorological Cinderella" (February 8, 1965); "The Matchbox Pole-balancer—A Computer Programme which Learns by Trial and Error" (March 22, 1965). Further information can be obtained from Dr. R. E. Lister, Arthur D. Little Research Institute, Inveresk Gate, Musselburgh, Edinburgh.

CORRIGENDUM. In criticizing the illustrations in *Animal Worlds*, by Marston Bates (*Nature*, 203, 907; 1964), Dr. L. Harrison Matthews stated that a photograph labelled "living zoo-plankton" is manifestly a preserved dead sample. The sample was, in fact, merely narcotized and was thus still living.