

earlier part of Pluvial II. times which, according to the Glacio-pluvial correlation, would belong to Riss days. The discovery was so disturbing that, beyond recording the facts in private letters, I forbore to give it wider publication pending further research. This will be carried out next year.

The discovery is not quite unique, however, for in 1926, Mr. T. Hirst, of the Geological Survey of Uganda, discovered a broken digging-stone at a depth of 3 feet from the surface in undisturbed deposits of a gravel apron connecting the 50-foot terrace of the Kafu river in Bunyoro with the river-flat deposits, both of which are interpreted as of Pluvial II. date, the latter being brought in by secular disturbances in Pluvial II. times. This inconvenient discovery appears to have been set aside and overlooked, and was only brought to light again when the corroborative evidence of the digging-stone of Nsongegi was produced.

Digging-stones have been regarded as of late appearance, but I have some which almost certainly date back to the dry period following Pluvial II. and preceding the Makalian Pluvial (presumably of Bühl date) of Kenya. They have not hitherto been found apart from the work of neanthropic man, and the two discoveries cited above strongly suggest that neanthropic man was in existence in the early part of Pluvial II. days, a possibility which, as I have said, I have hesitated to indicate. There is, however, less objection to it now that Reck's claim has been re-examined and upheld. E. J. WAYLAND.

15 Westcliff Terrace Mansions,  
Ramsgate, Nov. 13.

#### Organisation of Scientific Abstracting Services.

As chairman of a small committee entrusted with the task of surveying the methods employed in scientific and technical abstract services, I invite the co-operation of editors and intelligence officers in collecting a body of information from which suggestions leading to increased efficiency may be derived. A conference recently held at the invitation of Mr. H. T. Tizard, president of the Association of Special Libraries and Information Bureaux, was attended by representatives of a large number of such services. Consideration was given, *inter alia*, to methods of dealing with foreign publications; this is one of the subjects in which information is sought, but the opportunity is being taken to gather confidential statements of fact and opinion which will form the basis of a comprehensive report on this most essential contribution to scientific progress. Responsible officers of organisations of the character indicated are invited to complete a questionnaire which has already been dispatched, or will be forwarded on receipt of a post-card, by Mr. S. S. Bullock, general secretary of the Association of Special Libraries and Information Bureaux, 16 Russell Square, London, W.C.1.

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London, S.W.7,  
Dec. 4.

#### Gravity Anomalies.

IN India, Hayford gravity anomalies are unsatisfactory. The large negative and positive anomalies that are found cannot be ascribed to purely local density anomalies in the superficial crustal layer.

As a result of a somewhat lengthy investigation of these gravity anomalies, I have come to the conclusion that the Hayford hypothesis of isostatic compensation is incorrect, and that gravity anomalies can be ade-

quately explained by a warping up and down of the crustal layers. According to this hypothesis, the main gravity anomalies, after removing topographical effects without compensation, are due to departures of the granite-tachylyte and tachylyte-dunite interfaces from their normal levels. The Airy system of compensation applies to folded sedimentary ranges under which there has been a deep down warp of the crustal layers, but horst ranges and other positive elements of the crust are entirely uncompensated.

Although these conclusions have been mainly derived from observations made in India, there appears to be good evidence that gravity anomalies, outside India in both continental and oceanic areas, can be successfully explained by crustal warpings without compensation. In particular, this hypothesis appears necessary to account for the remarkable anomalies found by Dr. Vening Meinesz in the East Indian Archipelago.

A paper describing these investigations will be published shortly as one of the Professional Papers of the Survey of India. E. A. GLENNIE.

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#### Rotatory Magnetic Polarisation.

H. BECQUEREL<sup>1</sup> a énoncé le résultat suivant :

Pour les corps d'une même famille chimique le quotient de la rotation magnétique du plan de polarisation de la lumière  $\Lambda$  par le produit  $n^2(n^2 - 1)$ ,  $n$  désignant l'indice de réfraction, est un nombre qui varie peu.

J'ai montré<sup>2</sup> que ce quotient  $\frac{\Lambda}{n^2(n^2 - 1)}$  variait avec la température pour l'eau de 0° à 100° et pour le sulfure de carbone de 0° à 40°.

Il m'a semblé intéressant de faire la même étude pour le  $\beta$ -méthynaphtalène, dont Constantine Salceanu<sup>3</sup> a mesuré récemment la constante de Verdet et l'indice de réfraction à l'état fondu à six températures comprises entre 34° et 174°. Le tableau suivant montre que l'expression calculée augmente considérablement avec la température.

Températures.	$n$ .	$\Lambda \times 10^4$ .	$\frac{\Lambda}{n^2(n^2 - 1)} \times 10^4$ .
34°	1.6056	4512	1109
78.5°	1.5864	4359	1142
111.7°	1.5695	4187	1162
142.5°	1.551	4039	1194
174°	1.5286	3879	1242

EDM. VAN AUBEL.

Gand, le 10 octobre, 1931.

<sup>1</sup> *Annales de chimie et de physique*, 5<sup>e</sup> série, tome 12, p. 5; 1877.

<sup>2</sup> *Journal de physique*, Paris, novembre, 1896.

<sup>3</sup> *Comptes rendus de l'Académie des Sciences*, Paris, 20 juillet 1931, p. 161.

#### Superconductivity at High Frequencies.

WE have recently repeated with unsilvered vacuum flasks our experiments reported in *NATURE* of Aug. 29, p. 373, and in the *Phil. Mag.* of September last, and find lead and tin become superconducting with currents having frequencies of the order of 10<sup>7</sup> per second. We also find that the transition temperatures are progressively lowered as the frequency is increased.

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