

C₀, when attached to a very reactive head group, with C₁, when attached to a poorly reactive group, and reaches a maximum value at about C_{1.5}. It is interesting to note that it is not necessary for all the carbon atoms to be in the form of a chain but may be enclosed in ring systems.

One can see, therefore, that the Overton Meyer or Traube concepts of biological activity, i.e., lipid solubility or capillary activity must be modified by the introduction of concepts of

specific head group interactions. A study of these reactions, further permits us to investigate the nature of the coatings of cells or unicellular animals and plants, by examining the effects of lipid or protein penetrating substances on them.

This extremely interesting address of Prof. Rideal closes with a brief discussion of the possible sources of the bioelectric potentials observed in tissues.

M. A. G. RAU.

MAGNETIC NOTES FOR NOVEMBER 1939

MAGNETIC CONDITIONS.—The magnetic conditions during the month of November 1939 were quieter than those during the previous month. There were 19 days of *slight* disturbance and 1 day of *moderate* disturbance. No days of great or very great disturbance were recorded during the month. The number of quiet days was 10.

The quietest day during the month was the 22nd and the most disturbed day, the 13th. The actual characters of individual days is shown in the table below.

Magnetic Storms.—During the month a *moderate* storm was recorded on the 13th. This was the only storm recorded during the month as against three *moderate* storms recorded during the corresponding period in 1938.

Dates of the month	Quiet days	Disturbed days	
		Slight	Moderate
1939 November	2 to 8, 10, 16, 22.	1, 9, 11, 12, 14, 15, 17 to 21, 23 to 30.	13

Monthly Characters.—The mean character for the month of November 1939 is 0.70 as against 1.03 for November of last year.

M. R. RANGASWAMI.

Tambyacha Bungla,
Colaba, Bombay 5,
December 6, 1939.

ASTRONOMICAL NOTES

Planets during January 1940.—Mercury will be visible as a morning star for a few days in the beginning of the month and on January 31, will be in superior conjunction with the sun. Venus, moving slowly eastwards relatively to the sun, will continue to be a bright object in the western sky soon after sunset. Mars and Jupiter can be seen to the west of the meridian in the early part of the night. There will be a close conjunction of the two planets on January 7, the angular distance between the two, at the time being about a degree. Mars continues to get fainter, the stellar magnitude being 1.1 (nearly the same as that of Antares) at the end of the month.

Saturn resumes its slow eastward motion among the stars; on January 16, it will be in quadrature with the sun and will still be an interesting object for observation. Uranus has

a retrograde motion in the constellation Aries, until January 26 when it becomes stationary. The planet reaches the meridian at about 7.30 p.m. and can be seen very near the fourth magnitude star δ Arietis. Conjunctions of the moon with planets will occur as follows:— Mars and Jupiter on January 16, Saturn on January 17 and Uranus on January 19.

Comets.—Information has been received (*U.A.I. circ.* 797) of the re-discovery of Periodic Comet Giacobini—Zinner, on October 15, by Prof. Van Biesbroeck at the Yerkes Observatory. It was a faint diffuse object at the time (magnitude 15), but as it is getting nearer the earth and the sun, it is likely to become bright enough to be seen with moderate optical aid. The comet is due to pass perihelion on 1940 February 17, the computed period being 6.59 years.

T. P. B.