
On the Synchronous Distribution of Temperature over the Earth's Surface. [Abstract]

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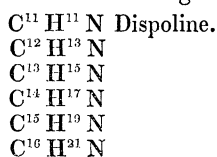
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In this paper he shows that the distillate from cinchonine contains not only a base isomeric with cryptidine, and which he calls dispoline, but also several other homologues of still higher atomic weight.

The separation of these bases is very difficult. They boil at too high a temperature to allow of separation by means of fractional distillation, and, in fact, most of them distil above the range of the mercurial thermometer.

The author gives the details of the methods employed by him to purify the mixtures of bases from resinous and tarry matters; they will not, however, be quoted in this abstract.

After trial of various methods of separation, the author finally adopts fractional precipitation of the platinum-salts. By following out this method, he obtained the platinum-salts of the following bases:—



He has not given names to the homologues above dispoline.

Summary.—The author concludes from the results of the first portion of the investigation of which the above is an abstract, that the base, of the formula $\text{C}^7 \text{H}^9 \text{N}$, existing in the distillate from cinchonine, is distinct from that obtained from Dippel's oil.

He submits also that the second portion of the investigation shows the chinoline series to consist of no less than eight members, three of them being isomeric with certain bases from coal-oil.

In conclusion he calls attention to the fact that the eighth homologue of chinoline differs only by $\text{C}^4 \text{H}^4 \text{NO}^2$ from cinchonine itself, and he is of opinion that bases free from oxygen exist in the distillate from cinchonine, containing almost, if not quite, as many equivalents of carbon as the cinchona alkaloids themselves.

V. "On the Synchronous Distribution of Temperature over the Earth's Surface." By HENRY G. HENNESSY, F.R.S., &c. Received May 26, 1864.

(Abstract.)

The results presented in the author's paper, entitled "On the Simultaneous Distribution of Heat throughout the superficial parts of the Earth" *, are confirmed and extended in the present communication.

* June 19, 1862. Proceedings, vol. xii. p. 173.