MISCELLANEOUS.

ARTICLES BY HAECKEL AND ABOUT HIM.

In connection with the present number which is chiefly devoted to Professor Haeckel and his work we here append for the convenience of our readers a table of references of articles by Haeckel and about him which have appeared in *The Open Court* and *The Monist* in former years.

Articles by Haeckel.

Goethe on Evolution (1890). *O. C.*, IV, 2111.
Phylogeny and Ontogeny (1891). *O. C.*, V, 2967.
The New Course of German Politics and the Purport of Its World-Conception (1892) *O. C.*, VI, 3215.
Our Monism: The Principles of a Consistent Unitary World-View (1892). *Mon.*, II, 481.
The Problem of Progressive Heredity (1894). *O. C.*, VIII, 3975.
The General Phylogeny of the Protists (1895). *O. C.*, IX, 4401.
The Kingdom of Protista (1895). *O. C.*, IX, 4423.
The Cellular Soul (1895). *O. C.*, IX, 4439.
The Phylogeny of the Plant-Soul (1895). *O. C.* IX, 4458.
Epigenesis or Preformation (1895). *O. C.*, IX, 4513.

Articles About Haeckel.

Paul Carus—Professor Haeckel's Monism (1892). In answer to Haeckel's "Our Monism." *Mon.*, II, 598.
Haeckel's Panpsychism (1892). *Mon.*, III, 234.
Haeckel's Confession of Faith (1893). *O. C.*, VII, 3528.
Haeckel's Work on the Artistic Forms of Nature (1902). *O. C.*, XVI, 47.
The Haeckel-Loofs Controversy (1903). *Mon.*, XIII, 24.
Haeckel's Theses for a Monistic Alliance (1906). *Mon.*, XVI, 120.
Professor Haeckel as an Artist (1906). *O. C.*, XX, 428.
A Visit with Professor Haeckel (1907). *O. C.*, XXI, 615.
Monism of *The Monist* compared with Haeckel's Monism (1913). *Mon.*, XXIII, 435.

Thomas J. McCormack. Professor Haeckel's New Philogeny (1895). *O. C.*, IX, 4369, 4401, 4423, 4458.

Paul von Rautenfeld. Haeckel's Theses: A Protest (1906). *Mon.*, XVI, 626.

Otto Herrmann. The Monism of the German Monistic League (1913). *Mon.*, XXIII, 543.

C. W. Kendall. Reflections on Immortality; Chap. XI of Haeckel's *Riddle of the Universe* (1913). *Mon.*, XXIII, 595.

CURRENTS OF THOUGHT IN THE ORIENT.

BY B. K. ROY.

Jagadish Chandra Bose and His Resonant Recorder.

Ask any educated man in India who the greatest of all living scientists in that country is, and the unanimous reply will be—Dr. Jagadish Chandra Bose. Dr. Paul S. Reinsch thus writes in his *Intellectual and Political Currents in the Far East*: "While it is the genius of India to be imaginative and philosophical, the Hindus are by no means lacking in capacity for accurate scientific work. That they are thus gifted has been abundantly proven by the achievements of such men as the renowned physicist, Dr. Jagadish Chandra Bose, who is by many considered to be the first inventor of wireless telegraphy; and of P. C. Roy and Gazzar, both noted chemists."

In the October *Modern Review* (Calcutta) Dr. Bose (author of *Plant Response, Comparative Electro-Physiology* and *Researches on Irritability of Plants*—all published by Longmans, Green & Co.) contributes an interesting article in which he gives an account of his newly invented "resonant recorder" by which the speed of nervous impulse in plants may be automatically recorded.

"All plants," says Dr. Bose, "are sensitive, and in certain plants there are tissues which beat spontaneously like the heart-beat of the animal. These throbbings are affected by drugs precisely in the same manner as the pulsations of the animal heart are affected by similar circumstances. As regards the electric response, the writer had in the year 1901 in his Friday evening discourse before the Royal Institution demonstrated the identical nature of reactions in the plant and in the animal. There remained only the question of the nervous impulse in plants, the discovery of which was announced by the writer ten years ago. It took, however, all those years before his conclusions found full acceptance by the publication in the *Philosophical Transactions* of the Royal Society....

"Though the effects produced in the animal and plant are so similar, yet from the results of certain experiments carried out by the leading plant physiologist, Pfeffer, it had been definitely settled that in the plant there is nothing corresponding to the nervous impulse in the animal. The effect transmitted in the plant is supposed to be one of hydro-mechanical blow and not of true excitation....

"The question of nervous impulse in plants has thus to be attacked anew and I have employed for this purpose twelve different methods. They all prove conclusively that the impulse in the plant is identical in character with that in the animal. Of these I give below a short account of three different methods of investigation. It is obvious that the transmitted impulse in Mimosa must be of an excitatory or nervous character:

"1. If it can be shown that physiological changes induce appropriate vibration in the velocity of transmission of the impulse.

"2. If the impulse in the plant can be arrested by different physiological blocks by which nervous impulse in the animal is arrested.