The two outstanding results appear to be, first, that the season at which the cuttings are taken governs to a large degree the percentage of rooting, and second, that treatment with indole butyric acid seems to retard rooting. The greater the concentration of this chemical the more rooting was retarded. In addition, long cuttings were superior to short cuttings and cuttings without heels rooted in greater numbers than those with heels. Placing the bases of the cuttings in tap water for 24 hours prior to planting in sand retarded rooting somewhat.

Terminal and lateral twigs of lateral branches located between six to eight feet from the ground were used when making the cuttings. Best rootage was secured from plain cuttings 10 to 20 cm long made in December and planted directly in the sand bench. In 14 weeks 90 per cent. of these cuttings were rooted. Both the December and January cuttings had larger roots and more advanced top development by May 1 than cuttings collected in October or November. In May more than a thousand rooted cuttings were planted in a tree nursery outdoors and in pots so that tests of their degree of immunity to spruce gall aphids could be conducted in the late summer.

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PHYSIOLOGY OF THE NERVOUS SYSTEM

IN his painstaking appraisal of my book, "Physiology of the Nervous System," which appeared in SCIENCE for July 7 (the anniversary of its publication), Dr. Forbes has suggested that I deliberately omitted treatment of the nerve impulse and certain basic problems of neuromuscular transmission. The statement is true and lest misconception should arise from the review, it must be pointed out that the book deals primarily with the *central* nervous system, including the autonomic division. Dr. Ralph Gerard will describe the special physiology of peripheral nerve, *i.e.*, the nerve impulse and neuromuscular transmission, in a separate monograph of this series, which will appear in the near future. This will also deal with the principles of electrophysiology.

Since Dr. Forbes likewise offers a friendly accusation of prejudice with regard to the humoral theory of synaptic transmission, may I take this opportunity of stating once again that I know of no evidence fit for critical examination that would place the liberation of acetylcholine as a *primary* event essential for synaptic transmission, in any division of the nervous system, central or peripheral. The work of Rosenblueth and Simeone cited by Dr. Forbes was published after my book had left the press. A full statement of the evidence for the electrical concept of synaptic activity will appear in a series of five papers by Drs. Gasser, Erlanger, Bronk, Lorente de Nó and Forbes in the September number of the *Journal of Neurophysiology*, which is now in the press. It seems therefore unnecessary to offer here any further defense of my position in this interesting and important controversy.

Save for those points, which might mislead the uninformed reader, Dr. Forbes's review is fair, generous and much appreciated.

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SCIENTIFIC BOOKS

The Distribution of the Stars in Space. By BART J. BOK, associate professor of astronomy, Harvard University. xvi + 124 pp. Chicago: University of Chicago Press, 1937. $2.50.

THE editors of the *Astrophysical Journal* are currently engaged in sponsoring a series of astrophysical monographs, which are designed to bring up to date the state of knowledge in the various fields of stellar astronomy. The first volume in the series, by Dr. Bok, is a critical exposition of the information available in 1937 on the distribution of the stars in the galactic system. A truly amazing number and variety of researches have been carried out in this field during the past fifteen years. To organize and discuss critically the results of these multitudinous investigations is an imposing task, and one which the author accomplishes with clarity and dispatch.

The fundamental problem of stellar statistics is to deduce the true stellar distribution in the galaxy from observational data on the apparent numbers, brightnesses, colors, spectral types and motions of the stars. Chapter I of "The Distribution of the Stars in Space" deals with the many statistical methods, both analytical and numerical, that have been devised for this purpose. Methods for detecting deviations from random stellar distribution in any area of the sky are valuable for promoting the discovery of inconspicuous dark nebulae. With regard to the problem of the determination of space densities, Dr. Bok discusses the relative merits of analytical and numerical methods and presents strong arguments in favor of the latter procedure. Simple analytical formulae are inadequate to represent the complex variations in stellar distribution over the sky. The most serious obstacle in the path of attaining a complete understanding of the details of stellar structure is the presence of clouds of obscuring material in the galaxy. The author describes how stellar statis-