to public health science, I must not fail to speak. Here is a field absolutely ripe for the harvest, but one in which the harvesters are as yet very few. I have lately had occasion to examine somewhat carefully the present condition of our knowledge of personal hygiene—which is nothing more (and should be nothing less) than the applications of physiologial science to the conduct of human life—with the result that I have been greatly impressed with its vast possibilities and promise. Man is a gregarious animal, and mankind is to-day crowding into cities as perhaps never before. Moreover, the industrial and commercial age in which we live is characterized to an extraordinary degree by the sedentary life. Yet the sedentary life is almost unavoidably an abnormal life, or at least it is a life very different from that lived by most of our ancestors. In the sedentary life the maintenance of a high degree of physiological resistance apparently becomes difficult, and if the vital resistance of the community in general is lowered then the public health is directly and unfavorably affected, so that considerations of personal hygiene have a direct bearing upon the science of public health.

There are, to be sure, interesting and suggestive symptoms of a wholesome reaction, in America, at any rate, against the evils of the sedentary life. Parks and open spaces are being liberally provided; public and private gymnasiums are rapidly coming into being; public playgrounds are thrown open in many of our cities, free of expense to the laboring, but, nevertheless, often sedentary, population; vacations are more than ever the fashion; sports and games are everywhere receiving increasing attention; while public baths and other devices for the promotion of personal hygiene are more and more coming into being. All this is as it should be, but all is as yet only a beginning. Here, again, the science of education is sadly at fault and in the direction of educational reform as regards personal hygiene lies immense opportunity for a contribution to public health science.

The science of *statistics*, which has done great service in public health science in the past, is likely to do much more in the future. Without accurate statistics of population, mortality and the causes of sickness and death, the science of epidemiology is impotent, and the efficiency or inefficiency of public health measures can not be determined. And yet in ignorant hands statistics may be worse than useless. It is a matter for congratulation to Americans that we now have in Washington a census bureau permanently established and under expert supervision, but until the various states and cities of the United States follow this excellent example of their Federal Government, one of the most important aids to public health science will continue to be wanting, as is unfortunately too often the case to-day not only in America, but in many other parts of the civilized world.

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SCIENTIFIC BOOKS.

Manual of the Trees of North America (Exclusive of Mexico). By Charles Sprague Sargent, director of the Arnold Arboretum of Harvard University, author of the Silva of North America; with six hundred and forty-four illustrations from drawings by Charles Edward Faxon. Boston and New York, Houghton Mifflin and Company; Cambridge, The Riverside Press. 1905. Pp. 24 + 826, octavo.

A few years ago Professor Sargent brought to a successful close his monumental work, 'The Silva of North America,' in fourteen massive quarto volumes, and including descriptions and figures of 585 species of trees.

While this must for centuries be the standard work on our native trees, its bulk and cost preclude its use elsewhere than in the herbarium, museum or library, and it was imperative that the same author should prepare a handy field (or rather, forest) manual which should give to a much larger number of people the opportunity of studying our forest trees. This has now been done in an admirable manner in the Manual which made its appearance some time in March of the present year.

The book opens with a synopsis of the sixty-one families of plants included, the sequence being that of Engler and Prantl's 'Die Natürlichen Pflanzenfamilien,' and this is followed by an analytical key to the families, based on the characters of the leaves. Then follows the descriptive manual proper, in which after a clear and pretty full characterization of each family there is given a conspectus or analytical key to the North American genera. The characters of each genus are set forth much more fully than they are in the usual botanical manuals, and a paragraph is usually appended giving geographical, numerical and economic data. A convenient key enables the student to readily find the particular species in which he is interested.

The specific descriptions leave nothing to be desired, usually including full descriptions of the leaves, flowers, fruits, seeds, the tree as a whole, its winter buds, bark and wood, and are followed by concise accounts of their natural geographical distribution, and the extent of their cultivation for ornamental and other purposes. With each species is a figure of the characteristic features of the species, usually the foliage, flowers and fruit. By means of these figures alone one can identify nearly every species.

The book is thus thoroughly satisfactory, and must at once become a standard among systematic manuals. It will appeal to the general botanist as a distinct and notable contribution to the literature of systematic botany, and at the same time it will be recognized by students of forestry as an indispensable handbook. For the latter, in this day of forestry schools and forestry courses of study in the colleges and universities, it is indeed fortunate that this manual has made its appearance. Without it North American dendrology was a most difficult subject for both professor and student, on account of the scattered and uncoordinated descriptions in the botanical manuals—the 'Silva' being quite too expensive a work for every-day use by students. This difficulty is now wholly removed by the publication of the manual.

Looking over the families which include North American trees, one finds that the conifers number 90 species and varieties; the palms, 10; *Liliaceae,* 9; the *Juglandaceae,* 15; *Salicaceae,* 32; *Fagaceae,* 52; *Rosaceae,* 169 (of which 132 are species of *Crataegus*); *Leguminosae,* 34; *Aceraceae,* 17; *Cornaceae,* 8; *Ericaceae,* 9; *Oleaceae,* 19. The generic and specific nomenclature is modern, so that one finds *Tumion* (instead of *Torreya*), *Hicoria* (instead of *Carya*), *Toxylon* (instead of *Maclura*), *Malus* (instead of *Pyrus*), *Sassafras sassafras* (instead of *Sassafras officinale*), and *Catalpa catalpa* (instead of *Catalpa bignonioides*). No attempt is made to cite synonyms, the author evidently assuming that the student might well trust him in the selection of the oldest available name. The author has added a handy glossary of technical terms, and the volume closes with a very full index in which English and Latin names are arranged in a single alphabetical series, thus avoiding the nuisance of two indexes, one for the common and another for the scientific names.

This book suggests to one that Professor Sargent is the man to give us a similar book devoted to the exotic trees (and probably shrubs also) of which so many are now given in this country.

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SCIENTIFIC JOURNALS AND ARTICLES.

The Journal of Comparative Neurology and Psychology for May contains an article of 100 pages, entitled 'The Morphology of the Vertebrate Head from the Viewpoint of the Functional Divisions of the Nervous System,' by J. B. Johnston, of West Virginia University. The 'head problems' have recently re-