

2. I have taken strains riddled with cancer and by the type of breeding tests described in my published work have eliminated the disease absolutely from the strain and its hybrids.

3. A mass of data still unpublished shows that these things can be done not only with cancer in general, but also with cancer of specific organs and of specific types.

The persistent criticism of my "unorthodox" results in *color transmission* in this hallowed cross between an albino and a house-mouse only serves to confuse the issue with regard to the question of cancer inheritance; and if Dr. Little wishes to criticize my cancer work further, in the interests of logic I ask him to do so on the lines of my cancer work and not on the basis of color transmission.

II

It is impossible to agree with Dr. Little that any reference to "the great laws of heredity" must necessarily refer only to Mendel's laws, since every student of genetics knows that there is a vast array of facts of heredity which by no possible compression can be forced within the limits of these laws. Especially does every worker with the coat colors of mice know this fact. Perhaps an amendment may in time be added to those theories now supposed by Dr. Little to be a closed issue like the Koran.

III

The publication of my results in color transmission will be attended to in due time. These data belong with a mass of facts collected in the study of the inheritability of coat pattern. It would be impossible to get this material in form for immediate publication without seriously neglecting experiments now under way in the study of cancer.

MAUD SLYE

THE OTTO S. A. SPRAGUE MEMORIAL INSTITUTE

A MOLLUSK INJURIOUS TO GARDEN VEGETABLES

DURING the past summer a small slug or *Limax* was noted to be injuring garden vegetables of several kinds. It seemed rather large for the common *Agriolimax agrestis* (Linné)

and specimens were submitted to Dr. H. A. Pilsbry for an opinion. They were found to be this species. Both underground vegetables and the leaves of the plants were attacked. In Canandaigua they were observed to attack potatoes, the mollusk frequently eating a hole in the tuber as large as its own body. As many as a dozen potatoes were observed to be thus eaten. In the same garden this slug attacked the string beans, eating into the full pods and consuming the beans. In Rochester, a garden was examined in which the potatoes were affected in the same manner as those at Canandaigua. In Syracuse, this slug was observed in cauliflower, in company with the smaller black slug, *Agriolimax campestris* (Binney). Some lettuce was also eaten by these mollusks. It is probable that this slug (*agrestis*) may become a pest in some localities.

Agriolimax agrestis is very abundant about Syracuse, in the east end, the hill portion, where one may see dozens of the slugs crawling on the sidewalk after a rain in a manner similar to the earthworms. This is particularly true on Euclid Avenue, where the morainic hills border the sidewalk on the south side. This brown slug as well as its smaller black relative is abundant in the woods and fields in and around Syracuse.

FRANK COLLINS BAKER

NEW YORK STATE COLLEGE OF FORESTRY,
SYRACUSE UNIVERSITY

SCIENTIFIC BOOKS

La Science Française. Librairie Larousse, Paris, 1915. 2 Vols. Pp. 396 and 403. Illustrated with portraits.

The dominance of German science during our generation seems to have been rather generally accepted, a principal cause of which is clearly seen in efficiency of organization essentially military in its nature. With attention now focused upon German efficiency, it is possible to discern certain elements of this success which before had been obscure. The systematic German mind, with its pertinacity and indefatigability of purpose, has found one of its expressions in the preparation of exhaus-

tive treatises for each branch of science, bigger and more comprehensive than any which had preceded them. Such treatises have been particularly full in their discussion of the work of German investigators, and the wide familiarity with the field of a science which results directly from successful compilation has yielded a type of authority quite distinct from, though often joined to, that which has been responsible for a great advance through original investigation. Those who have attended international congresses in some field of science have not failed to note that German delegates have been much the most strongly represented, whether the place of meeting were near or far from their native land, and that their papers presented at the meeting have been so coordinated as to produce a telling effect. In many cases provision has been made by the government for the expenses of professors who are in attendance upon such international meetings. It can hardly be doubted that German science has for these reasons been given a most favorable presentation before the representatives of other nations.

It is not impossible that the advantage of the German scientists due to their propaganda has been fully realized by the French nation; but in any case the new history of French science prepared by the Ministry of Public Instruction with special reference to the Exposition at San Francisco, has served well the purpose of revealing the high position of French science before the world, with the inevitable consequence of originality and initiative due to individualism as contrasted with organized group efforts. The two volumes serve to introduce the reader to a truly remarkable library covering the field of French science which was exhibited at the exposition. The collection was made up, on the one hand, of books yellow with age and, on the other, of those on which the ink is hardly dry. In the language of the general introduction by Lucien Poincaré:

"In these works of such varied date and such different aspects one finds concentrated, so to speak, the thought of an entire people; here is the essential part which France has

brought to scientific progress; here is the display by the authors themselves of the great discoveries due to her creative genius.

"For each science the attempt has been made to trace the origin to the moment when in France an order of studies important by reason of the intellectual or moral profit which they have brought to the human race, was approached for the first time and became the object of researches systematically conducted. The desire has been to mark the origin, the point from which so many hardy explorers have gone out on the eternal voyage toward research and truth. There has been indicated along the path traced by their glorious efforts, the summits from which the new horizons have been descried. Finally, with some insistence there have been set forth those stations actually attained, to be surpassed by the labors of to-morrow through following directions which it was sought to make precise."

Each field of science has been treated by a master mind, and in no way can the high authority of the work be so well set forth as by a transcription of the tables of contents. The first volume, devoted to pure science, includes the following chapters: French Science at the San Francisco Exposition, by Lucien Poincaré; Philosophy, by Henri Bergson; Sociology, by Émile Durkheim; Educational Science, by Paul Lapie; Mathematics, by Paul Appell; Astronomy, by B. Baillaud; Physics, by Edmond Bouty; Chemistry, by André Job; Mineralogy, by Alfred Lacroix; Geology, by Emm. de Margerie; Paleobotany, by R. Zeiller; Paleontology, by Marcellin Boule; Biology, by Félix Le Dantec; Medical Science, by Henri Roger; Geographical Science, by Emm. de Martonne.

The second volume is devoted to the humanities, and includes the following chapters: Egyptology, by G. Maspero; Classical Archeology, by Max. Collignon; Historical Studies, by Ch.-V. Langlois; History of Art, by Émile Male; Linguistics, by A. Meillet; Hindu, by Sylvain Lévi; Chinese, by Ed. Chavannes; Greek, by Alfred Croiset; Latin Philology, by René Durand; Celtic Philology, by Georges Dottin; The French Language, by Alfred

Jeanroy; French Literature of the Middle Ages, by Alfred Jeanroy; Modern French Literature, by Gustave Lanson; Italian, by Henri Hauvette; Spanish, by Ernest Martinenche; English, by Émile Legouis; German, by Charles Andler; Juridical and Political Science, by F. Larnaude; Economics, by Charles Gide.

Each chapter is followed by a well-chosen bibliography of the great French works within its field, and the work is embellished by portrait illustrations, Pasteur having been selected for the frontispiece of Volume I., and Renan for Volume II. The press work, while without any luxurious quality, is dignified and in the best French taste.

WM. H. HOBBS

UNIVERSITY OF MICHIGAN

SCIENTIFIC JOURNALS AND ARTICLES

THE December number (Vol. 22, No. 3) of *The Bulletin of the American Mathematical Society* contains: "Concerning absolutely continuous functions," by M. B. Porter; "On the representation of numbers in the form $x^3 + y^3 + z^3 - 3xyz$," by R. D. Carmichael; "On the linear continuum," by R. L. Moore; "A problem in the kinematics of a rigid body," by Peter Field; "Jules Henri Poincaré" (review of *Enquête de "l'Enseignement Mathématique" sur la Méthode de Travail des Mathématiciens*, second edition, and *Lebon's Notice sur Henri Poincaré and Savants du Jour: Henri Poincaré*, second edition), by R. C. Archibald; "Shorter Notices"; Breslich's *First-Year Mathematics for Secondary Schools*, by D. E. Smith; *Braude's Coordonnées intrinsèques*, by R. C. Archibald; *Châtelet's Leçons sur la Théorie des Nombres*, by E. B. Skinner; *Salmon's Treatise on the Analytic Geometry of Three Dimensions*, fifth edition, volume 2, by Virgil Snyder; *Hermann Grassmann's gesammelte mathematische und physikalische Werke*, Band 3, by E. B. Wilson; "Notes;" and "New Publications."

THE January number (Vol. 22, No. 4) of the *Bulletin* contains: Report of the October

meeting of the society, by F. N. Cole; Report of the twenty-seventh regular meeting of the San Francisco Section, by Thomas Buck; "Transformation theorems in the theory of the linear vector function," by V. C. Poor; Review of Hobson's *John Napier and the Invention of Logarithms, 1614*, and Gibson's *Napier and the Invention of Logarithms*, by R. C. Archibald; Review of Moritz's *Memorabilia Mathematica*, by R. C. Archibald; "Shorter Notices"; Hill's *Development of Arabic Numerals in Europe*, by D. E. Smith; Caunt's *Introduction to the Infinitesimal Calculus*, by T. E. Mason; Lenz's *Die Rechenmaschinen und das Maschinenrechnen* and Furtwängler and Ruhm's *Mathematische Ausbildung der deutschen Landmesser*, by E. W. Ponzer; Dickson's *Algebraic Invariants*, Borel's *Leçons sur la Théorie des Fonctions*, second edition, Bateman's *Mathematical Analysis of Electrical and Optical Wave-Motion on the Basis of Maxwell's Equations*, and Rutherford's *Radioactive Substances and their Radiations*, by R. D. Carmichael; "Notes"; and "New Publications."

SPECIAL ARTICLES

THE POISONOUS EFFECTS OF THE ROSE CHAFER UPON CHICKENS

SERIOUS losses have occurred each year during June and early July, from chickens having eaten the rose chafers (*Macrodactylus subspinosus*). These losses have often been ascribed to various causes, but close observations have shown that the chickens are very fond of eating these insects in large numbers, and post-mortem examinations have revealed the presence of many undigested insects in their crops. The crops are usually so full as to give the impression that death had been due to a "crop bound" condition of the chickens. Some have also supposed that these deaths were due to a mechanical injury of the crop by the spines on the legs of the insects having punctured the lining of this part of the digestive system, while others have accounted for the death of these chickens by the rose chafers having bitten the crops.

A number of cases, some of which resulted