

lege Park, Md.; S. J. Hunter, Lawrence, Kan. The foreign members elected were: Edward Barlow, Calcutta, India; E. E. Green, Pundaluoya, Ceylon; A. M. Lea, Hobart, Tasmania; J. S. O. Tepper, Adelaide, South Australia.

The list of papers read and discussed included the following: 'A Destructive Tanbark Beetle,' A. F. Burgess (read by the secretary); 'Voluntary Entomologic Service in New York State,' 'Notes of the Year for New York,' E. P. Felt; 'Recent Work against the Gypsy Moth,' 'The Destruction of Hairy Caterpillars by Birds,' E. H. Forbush; 'A Remedy for Gad-flies; Porchinski's Recent Discovery in Russia, with some American Observations,' 'The Establishment of *Blastophaga psenes* in California,' L. O. Howard; 'The Pea Louse, A New and Important Species of the Genus *Nectarophora*,' 'A New Method of Handling Hydrocyanic Acid Gas in Orchards,' 'Entomological Notes from Maryland,' 'The Stalk Worm, a New Enemy to Young Tobacco,' W. G. Johnson; 'An Improvement in the Manufacture of Arsenate of Lead,' 'A Probable Remedy for the Cranberry Fire-worm,' A. H. Kirkland; 'Miscellaneous Notes,' C. L. Marlatt; 'The Original Home of the San José Scale,' C. L. Marlatt and L. O. Howard; 'Observations on Insects of Sandusky and Vicinity,' H. Osborn; 'Insects of the Year in Georgia,' A. L. Quaintance; 'The Fatal Temperature for some Scale Insects in Georgia,' W. M. Scott; 'Insectary and Office Methods,' 'An Interesting Outbreak of the Chinchbug in Northern Ohio,' F. M. Webster; 'Insects of the Year in Ohio,' F. M. Webster and C. W. Mally. The following papers were read by title: 'A New Breeding Cage for *Schizoneura lanigera*,' W. B. Alwood; 'A Destructive Orange Borer imported from Japan,' 'The Full Life History of *Pulvinaria acericola*, W. and R.,' L. O. Howard.

Officers for the ensuing year were elected as follows: President, Lawrence Bruner; First Vice-President, C. P. Gillette; Second Vice-President, E. H. Forbush; Secretary-Treasurer, A. H. Kirkland.

Resolutions were passed: (1) endorsing the work of the Massachusetts Gypsy Moth Committee; (2) the quarantine work of the California State Board of Horticulture; (3) expressing full sympathy with judicious State and National legislation tending to prevent the introduction of foreign insect pests and to secure the control or extermination of such as have become established in this country; (4) expressing appreciation of the action of the Honorable Secretary of Agriculture in publishing the proceedings of the Association in previous years; (5) expressing thanks to the local committee and the officers of the Association. The next meeting will be held on the two days preceding and at the same place as that of the American Association for the Advancement of Science.

A. H. KIRKLAND,
Secretary.

SCIENTIFIC BOOKS.

I Sogni, Studi psicologici e clinici di un alienista.
SANTE DE SANCTIS. Turin. 1899.

This latest of books about dreams and dreamers is written not only, as its title indicates, from the standpoint of the alienist, but also from that of the comparative psychologist. Its introductory chapters on literature and method are followed by discussions of the dreams of animals, children, old people and adults, of the dreams of the neuropathic, the mentally deranged and the delinquent.

It is safe to say that no book ever written on the subject has taken into account so large a number of dream experiences, for De Sanctis throughout compares the results of his own observation with the published records of the study of others. The book has thus a bibliography of three hundred and twenty-three numbers, though it dispenses with the convenience of page references.

The method of investigation which is most often employed is that of the statistical inquiry, but this is supplemented by the methods of personal questioning, observation of the sleeper's movements and experimental stimulation.

Practically all the methods by which dreams have been studied are therefore employed, except that of 'direct observation,' by which the dreamer, immediately after waking, records his own dreams and notes their vividness, their relation to waking experience and other important features. De Sanctis justly criticises this method, on the ground that the intention of studying one's dreams is itself an artificial condition, predisposing the subject to dreams of unusual frequency and of unnatural content; but the difficulty, which undoubtedly exists, he distinctly overstates, for individuals differ greatly in their ability to preserve a normal disposition under artificial conditions. The writer of this notice, for example, observed her own dreams, after the method already described, for nearly two months. The work of recording the dreams and their conditions was performed with mechanical, and, so far as possible, with unreflective, accuracy; and the study of the records was not undertaken until the completion of the observations. The result in this case was the record of about two hundred dreams, which were certainly very closely representative of the ordinary dream-life of the observer and noticeably destitute of unusual or abnormal features.

On the other hand, De Sanctis does not sufficiently emphasize the disadvantages of the statistical method which lies at the basis of the greater part of his conclusions. The extreme liability, varying as it does with individuals, to forget one's dreams, throws grave doubt upon the answers of people, untrained in introspection, to questions about the frequency and the vividness of dreams, the emotional nature and the connection with waking experience.

The uncertainty of the inference from bodily motions to the accompanying facts of consciousness, when these cannot be tested by the waking memory of the sleeper, seriously affects the conclusions of the chapter on the dreaming of animals. The discussion of children's dreams, on the other hand, is illuminating and suggestive

in so far as it is based upon the author's personal study of the dream-life of his own children. He concludes that children begin to recall their dreams at four or five years of age and he identifies this period with the epoch of the distinct consciousness of self; but he concludes that children actually dream before the years when they recall their dreams, from the fact that characteristic movements in sleep, such as laughter and irregular breathing, which are later proved to accompany dreams, do actually occur before the fourth year.

Only twenty subjects of advanced age were questioned about their dreams, and these confirmed the ordinary statements concerning the infrequency and the colorlessness of the dreams of the aged. The fact that only one of these twenty reviews, in her dreams, the life of her youth, confirms the results of experimental studies in waking association, and shows that old people differ, like younger ones, in their tendencies to recall the distinct periods of their lives; some of them, waking and sleeping, occupy themselves mainly with the past, but others live a life full of present issues.

The chapter on the dreams of adults includes summaries of earlier work on the same line and the results of statistical inquiry comprising answers from one hundred and sixty-five men and from fifty-five women. These figures are too disproportionate in themselves to permit the comparison, which De Sanctis proceeds to make, between the dreams of men and of women. His conclusions, however, while numerically very different from those of Heerwagen, are of the same general nature; he finds (p. 135) that women's dreams are more frequent, more vivid and better remembered than those of men. Like all other investigators he shows also the close connection of dreams with waking experiences.

The discussion of the inquiry which follows—statistical and personal—into the dreams of the mentally deranged is itself too condensed to be readily summarized. Imbeciles and epileptics (except those slightly affected) are found to dream infrequently; hysteric patients, on the other hand, and paranoiac subjects are set down as constant dreamers.

The last of these comparative studies, that

of the dream-life of delinquents, is of especial interest. It is greatly to be regretted that De Sanctis fails to give more exact details of his method of inquiry. Written answers would have been impossible from most of these subjects, so it is probable that the statistics are compiled from personal questioning; and, in this case, it is reasonable to suppose that De Sanctis made his questions concrete enough to secure naïve and reliable answers. A fuller account of his methods should, however, have been given, especially in view of the unequivocal interest of the results (p. 237). Less than one-fourth of the one hundred and twenty-five criminal subjects, and only one-seventh of the class of lowest criminals, are frequent dreamers; whereas one-fourth of the entire number, and two-fifths of the most depraved, are never conscious of dreaming. This suggests, of course, a low degree of mental activity on the part of these subjects, and this indication is strengthened by the observation that by far the greater part of delinquents' dreams are of an entirely unemotional nature. The most curious effect of this tendency is that the criminal seldom dreams of his own crime and when he dreams of it is as likely as not to be entirely unmoved. Twenty-two subjects, out of ninety-three, acknowledged the occurrence of dreams of this character, but half of these stated that such dreams were without emotion.

The emotional nature of the dream is a subject which De Sanctis treats at length, to the comparative disadvantage of such topics as imagery, association and thought in dreams. The chapter on 'Sogni ed Emozioni,' which considers especially the relation of dream-emotions to those of the waking life, is one of the most suggestive of the entire volume. Its chief conclusions are these:

Nearly three-fifths of the normal adult subjects, and many of the hysterical and neurasthenic subjects, have dreams which are distinctly influenced by daytime emotional experiences. Chronic emotions, rather than unexpected and sudden feelings, and emotions of uncertainty, like doubt, suspicion, fear and hope, rather than feelings of settled grief, are reproduced in dreams. And, finally, De Sanctis records his conviction that only emotions of

medium intensity are radiated out into the dream-life, since, as he observes, extreme feeling 'consumes force' by the organic excitement which accompanies it. For this reason, and also because suspense rather than certainty marks the dream-feeling, we so seldom dream of the dead at times of recent bereavement.

Cases in which the dream emotion is carried over into the waking life are carefully considered. De Sanctis is of opinion that many cases of the fixed idea and of paranoia are directly traceable to dream experiences, and the extent of his observations lends force to his remark that a suggestion, given for instance in the hypnagogic state, which should effect the dream-life, might indirectly influence the abnormal waking condition.

The experimental observations undertaken by De Sanctis were few in number and are insufficiently reported. The results, such as they are, confirm those of the few published records and of certain unreported experiments of the writer of this notice, all of them tending to show the possibility of artificial modification of the imagery and the emotion of a dream through artificial stimulation. The experimental study of dreams should, however, be widely extended, though the difficulty of accurately reporting the dream experience by the waking memory affects the most important factor of the experimental solution of psychic problems.

De Sanctis briefly summarizes and very justly estimates the physiological theories concerning sleep and dreams. He himself lays stress upon the comparative absence of peripheral stimuli, during periods of cerebral excitation, as at least a sufficient basis for the explanation of the dream experience.

MARY WHITON CALKINS.

WELLESLEY COLLEGE.

GENERAL.

THE International Institute of Bibliography at Brussels has published a pamphlet discussing the plans of the Royal Society's Catalogue of Scientific Literature. These are criticised somewhat severely, it being claimed that the Royal Society's plans are defective owing to lack of experience in bibliography and the failure to consider catalogues already in operation.