ably normal] of a forty-six year old woman") which reveals nothing of consequence.

Fully two-thirds of the volume consists of a bibliography of some 1800 references cited by titles. Six hundred of these have nothing to do with the subject but are references to the anatomy, embryology, histology, and physiology of various other structures that comprise the parietal region of the vertebrate brain (paraphysis, pineal eye, subcommissural organ, and the habenular ganglion and commissure). They were probably included for the sake of completeness, but since they are for the most part written in foreign languages, including Japanese, they afford little information for the average reader.

This book succeeds, to some degree, in dispelling the current belief that the pineal body is functionless. In the rabbit and several rodents at least, it seems evident that the pineal body does exert an inhibitory influence on the gonads and accessory reproductive structures. The nature of this control and its possible interplay with various endocrine and neurohumoral mechanisms remains totally concealed. The sexual precocity encountered in boys in the presence of some kinds of pineal tumors suggests that in man the gland may play a similar role.

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K* (*Krebiozen—Key to Cancer?). Herbert Bailey. Hermitage House, New York, 1955. viii + 312 pp. $3.50.

A few years ago Stevan Durovic, a Yugoslav refugee physician working in Argentina, extracted a substance from the blood of cattle that he thought was produced by stimulation of the reticuloendothelial system. This substance, tested in a local clinic, was encouraging in the treatment of hypertension and, under the name of Kositerin, was brought by Durovic to the United States for further clinical testing.

Later Durovic revealed that at about this same time, working in secret, he had discovered that, by injecting horses with extracts of the fungus *Actinomyces bovis,* he was able to stimulate in the host the production of a growth-regulating substance that, according to this hypothesis, would be effective in cancer control. Only 2 grams of the substance, later named Krebiozen, was obtained from 10,000 gallons of horse blood. Initial tests of Kositerin in hypertension proved disappointing.

Durovic then presented to the distinguished physiologist, Andrew C. Ivy, at that time a vice president of the University of Illinois, the problem of determining whether Krebiozen was effective in causing the regression and possible eradication of tumors. This was in the summer of 1949. Late in 1950 all the remaining supply of Krebiozen was placed in about 200,000 ampules with mineral oil, making a satisfactory chemical analysis of it difficult or impossible. In March 1951, Ivy assembled the available data on 22 patients into a brochure entitled "Krebiozen: an agent for the treatment of malignant tumors," and set a date for the announcement of the drug to a group of 80 persons, including physicians and newspaper writers.

The events since that time have been exceedingly confused and controversial. The author of this book presents the case for the substance, Krebiozen, and for Ivy, Durovic, and their friends. It is interestingly written, apparently primarily for the layman. It presents the thesis that Krebiozen and Kositerin existed as two substances, that its backers deplored and attempted to prevent the early newspaper publicity, and that they were persecuted by certain officials of the American Medical Association, the organization that has prevented effectively the further testing of the drug.

In discussing the failure to seek a patent, the author seems unaware that it is the practice of pharmaceutical manufacturers in the United States to reveal to clinical investigators, in confidence, as much as is known concerning the origin, composition, and actions of new drugs prior to their study in patients.

It is of some interest that the early cases responded, if at all, to a single ampule of the drug, but the dose was increased to an average of 80 ampules in a later series of cases treated by Ivy. Also there was a gradual shift of emphasis from the carcinostatic action of the drug to its analgesic or euphoric action. Failure to obtain tumor regression often is accredited to inadequate dosage, and success often is measured in terms of lack of pain until death.

Obviously this book presents only a part of this controversial subject.

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Elements of Ecology. George L. Clarke. Wiley, New York; Chapman & Hall, London, 1954. xiv + 534 pp. Illus. $7.50.

Academic ecology has been slow in maturing. The student who elects the subject in an American university may spend most of his time bird-walking, or on the other hand he may at once be put to testing Pütter's hypothesis. One suspects that the field will become set in pedagogic molds only after drastic subdivision; meanwhile student transcripts make common currency of all sorts of odd experiences because they bear the name *ecology* in the catalog.

In this book George L. Clarke has made a helpful contribution toward the averaging of current views on what should go into a course in general ecology. It was his purpose "to bring together in one place and in a simple way the elements of ecology with special emphasis on the modern viewpoint of the science." The first chapter gives definitions and a statement of the divisions and scope of the subject. After this come 286 pages (seven chapters) describing the physical and chemical constitution of the environment, with varying amounts of illustration of

the biological effects of the factors considered. There follows a 48-page section on population ecology (intraspecific relationships). The next 100 pages treat interspecific relationships, the community, and succession and fluctuations. Trophic levels, productivity, and the ecosystem concept are taken up in the final 42 pages.

I would call the balance among the major elements adequate, since balance in an ecology course is largely a matter of personal leaning anyway. I regretted some missed opportunities to offer concrete examples of physicobiological interplay—there are not enough animals in the book to satisfy me. There are a number of statements with an oddly anthropocentric cast, especially in the preface; and some may believe that there is a disproportionate use of examples from the marine environment. Such criticism as this is mostly personal bias, and so, perhaps, is my notion that the idea of the life-web should have been developed at the earliest possible opportunity, and that the section on the community should have been expanded, because the community is the smallest closed interspecific system and the best place in an ecology course to show the reality and intricacy of life-web operations.

The book is admirable in its general rejection of the dreadful jargon of ecology. A disappointing feature is the failure to pare, integrate, and set logical bounds to the intractable subject treated. The execution or reproduction of a few of the illustrations is inferior. Otherwise the book is sound and informative and reflects the wide experience of the author and his long conviction that there really is a teachable ecology of the land, sea, and fresh waters.

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Der Scharlach und seine Behandlung. W. Pulver. Hans Huber, Bern–Stuttgart, 1954. x + 209 pp. Illus. Paper, DM 19.80.

This thoroughly documented volume, by the chief of medicine at the Kantonspital of Lucerne, reviews the complex problem of scarlet fever and its treatment and reports Pulver's experience in treating more than 700 cases of scarlet fever with penicillin during a period of eight years. Basing his conclusion on the successful results obtained with penicillin, Pulver emphasizes the paramount significance of group AB-hemolytic streptococci in the etiology of scarlet fever. Treatment with penicillin leads in a few days to the disappearance of the organisms from nasal and pharyngeal swabs, and most cases of scarlet fever take a much milder course.

The author believes that scarlet fever serum should be employed only in very severe and moderately severe cases in combination with penicillin. In such cases the serum is employed as an antitoxin. According to Pulver, the most recent type of depot penicillin—he refers specifically to Bicillin—has simplified and improved the treatment of scarlet fever. He deals extensively with the prevention and successful treatment of the complications of the disease by means of penicillin. Noteworthy is his conclusion—this treatment reduces not only the complications caused by bacteria but also sequelae resulting from allergic reactions. A prerequisite for success is early and active treatment with penicillin over an adequate period. Treatment should be coupled with strict isolation.

Although the American reader will not find anything remarkably new in this volume, it does offer a good picture of progressive thought and practice concerning scarlet fever in the German language area. The author has collected a bibliography of 520 references that will be useful to anyone interested in the subject. There is also a subject index.

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The Psychological Variables in Human Cancer. Symposium presented at VA Hospital, Long Beach, Calif., 23 Oct. 1953. Joseph A. Gengerelli and Frank J. Kirkner, Eds. Univ. of California Press, Berkeley, 1954. 135 pp. Illus. $3.

This is the report of a symposium presented at the Veterans Administration Hospital in Long Beach, Calif., at which were presented and discussed six papers having to do with the effects of emotional attitudes on the genesis of cancer or the longevity of cancer patients. Three papers present theoretical considerations, one presents case material anecdotally, and another presents work in progress, but not sufficiently advanced to permit conclusions, on autonomic functions in neoplastic diseases.

The major presentation, "Results of the psychological testing of cancer patients," by Eugene M. Blumberg, reports work done to test the clinical hunch of Frank Ellis and Philip West that longevity and responsiveness to treatment are related to psychological factors. A group of 50 patients with miscellaneous advanced cancers were studied by means of the Wechsler-Bellevue, the Minnesota Multiphasic Personality Inventory, and Rorschach tests. By the use of certain scores of the MMPI, Blumberg concluded that

> . . . characteristics of the fast cases are greater defensiveness, more anxiety, and less ability to release tensions through motor discharge, either verbal or physical, when compared to the slow cases. Defensiveness is representative of the patient who is motivated to appear "good" and refers to his motivation to give an impression that he is less disturbed than he really is. . . . The fast cases show an inability adequately to defend themselves against anxiety or successfully to reduce their tensions through action.

There are many points of question in this paper. (i) It is "76 percent accurate" in prediction for "fast cases," but only 54.5 percent accurate in slow cases. (ii) No attempt was made to control the inherent variations of behavior in cancers of different sites. (iii) The antichymotrypsin and antirennin relationship in the blood serum is by no means generally accepted as an accurate indicator of disease activity.