from Rusian by Michel Boudart—*Princeton Univ. Press,* 330 p., paper, $4.50. On the kinetics of chain reactions, branched chain reactions and thermal explosions.

TRAVEL CHARACTERISTICS IN URBAN AREAS—Edward M. Hall and others—*Highway Res. Bd.,* 130 p., illus., paper, $2.60. Travel patterns in cities, in subdivisions, at peak hours, center city goods movement and use of computer in evaluation of data.

THE TRADITIONAL CHINESE CLAN RULES—Hui-Chen Wang Liu—*Augustin* for the Assn. for Asian Studies, Monograph 7, 264 p., $5.50. Systematic study of clan rules from the standpoint of social control.

TREATISE ON INVERTEBRATE PALEONTOLOGY: Part O: Arthropoda 1 (Trilobitomorphs)—Raymond C. Moore, Ed., *J. Geological Soc. of Am.,* 560 p., illus., $10.50. Primarily concerned with the trilobites, this volume of the Treatise is the product of the collaboration of 18 specialists from seven different nations.

TRIBES THAT SLUMBER: Indian Times in the Tennessee Region—Thomas M. N. Lewis and Madeline Kneberg—*Univ. of Tenn. Press,* 196 p., illus. by Madeline Kneberg, $3.75. For students and amateur archaeologists, this book reconstructs the early history of Indians living in the TVA reservoir area.

U. S. GOVERNMENT AWARDS UNDER THE FULBRIGHT AND SMITH-MUNDT ACTS: 1960-61 University Lecturing and Advanced Research in Europe, the Near East, the Far East and Africa—Committee on International Exchange of Persons—*Conference Bd. of Assoc. Research Councils, Comm. on Int'l Exchange of Persons,* 83 p., paper, free upon request direct to publisher, 2101 Constitution Ave., Washington 25, D. C.

VISION SCREENING FOR ELEMENTARY SCHOOLS: The Orinda Study—Henrik L. Blum, Henry B. Peters and Jerome W. Bettman—*Univ. of Calif. Press,* 146 p., paper, $3.75. Report of a three-year comparative study of vision-screening methods on more than 1,000 school children, with clinical evaluations.

WE COME FROM THE SEA—Hans Hass, transl. from German by Alan Houghton Brodrick—*Doubleday,* 288 p., photographs, $6.50. Picture-and-text study of marine life by marine biologist and skin-diver.

Science News Letter, June 20, 1959

ELECTRONICS

Electronic Processing Aids Tax "Revenooers"

ELECTRONIC PROCESSING of income tax returns soared to a new high this year, making it possible to detect would-be tax evaders more effectively. It also enabled the Internal Revenue Service to make speedier refunds to taxpayers than ever before.

The Service processed some 47,000,000 returns with high-speed electronic equipment this year, Commissioner Dana Latham told the southern states conference of Certified Public Accountants meeting in Oklahoma City.

This compared with 38,000,000 last year and an estimated 60,000,000 next year, he said.

One of the fruits of this year's record accomplishments was the scheduling of some $4,000,000,000 in refunds to taxpayers by the end of May, just six weeks after the filing deadline. This constituted the bulk of the refund, the Commissioner said.

Science News Letter, June 20, 1959

MEDICINE

Study Cancer Inheritance

Surveys of the families of persons who had had breast cancer, other forms of cancer, or had had no cancer indicate there may be a genetic factor causing breast cancer.

GENES MAY be involved in breast cancer.

More cases of breast cancer are reported among the grandmothers, mothers, sisters and aunts of women with the disease than can normally be expected, an Ohio State University researcher reports.

This excess appears to be at least partly due to the genes that determine heredity, Dr. Madge T. Macklin says in the *Journal of the National Cancer Institute* (May). If environmental influences alone were responsible for the higher breast cancer rate, females on a patient's father's side would not have the high rate that has been reported, Dr. Macklin explains.

Cultural patterns such as the tendency for women to have few or no children and to nurse those children they have are among the environmental factors commonly believed to play an important role in causing breast cancer. An objection to this interpretation, Dr. Macklin says, is that both paternal and maternal grandmothers show equally increased breast cancer rates over that found in the general population.

As evidence for the theory that heredity influences human breast cancer, the researcher cites statistical findings in her study of some 840 Ohio residents.

Of 327 aunts on the breast-cancer patient's father's side, 22 had verified breast cancers. Less than seven would be expected normally. Again, ten breast cancers were found in one group of grandmothers that "should" have had only about two and one-half cases.

The higher rate was found even among those relatives who had been married, Dr. Macklin says. The observed breast-cancer deaths were about twice the number expected in the "ever-married" aunt group, and almost four times as much in the single group.

Three different groups were questioned in the survey. One was composed of women who had had surgery for proved breast cancer; the second was made up of both men and women with cancer in some organ other than the breast; the third group included women who had, at the time of interview, no symptoms or signs of breast cancer. The entire family of each participant in the survey was investigated thoroughly, Dr. Macklin reports.

Science News Letter, June 20, 1959

MEDICINE

Thymus May Cause Disease

The existence of large thymus glands in abnormal adults, such as criminals, may be evidence that the gland plays an important role in many diseases and abnormalities.

THE MYSTERIOUS THYMUS gland may be nothing but a trouble maker during adult life.

This ductless gland-like body is located near the lungs. It was commonly thought that the gland "disappeared" during adolescence. However, numerous criminals that have been executed were found to have large thymuses. The "normal" adult does not have such tissues, a Milwaukee doctor reported at the American Medical Association meeting in Atlantic City.

This gland probably plays a large role in many diseases, Dr. Vaughan P. Simmons, assistant medical director of Northwestern Mutual Life Insurance Company, added.

The thymus follows a rhythmical pattern, becoming larger and then smaller. It becomes smaller as it produces white cells and dumps them into the blood stream.

This gland may produce the excessive white blood cells found in leukemia, cancer of the blood, the doctor explained. It has been found that the thymus must be present in certain strains of mice, if they are to develop leukemia. If these mice have no thymus, they do not develop the blood disease even when they are given leukemia-producing viruses. The thymus probably plays the same role in the disease in humans, Dr. Simmons speculated.

Some people do not believe that this gland plays a part in leukemia because the thymus is small on autopsy while other lymphoid tissues are full of white cells.

The thymus apparently plays a large role in growth, including the abnormal growth of cancerous cells. For instance, there is a tremendous release of mature thymic cells late in pregnancy, a period of rapid growth. This same release could be associated with other phenomena of rapid growth; the body does not know which are the demands of the unborn baby and which are those of a cancerous growth, he explained.

Dr. Simmons said that the thymus may be linked with other diseases such as pneumonia, various blood diseases, and the collagen diseases such as arthritis.

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