Julian H. Steward. Discussants were A. Irving Hallowell, E. Adamson Hoebel, Frank Tannenbaum, George C. Vaillant, John Whiting and A. K. Widjojoatmodjo. The chairman was Wm. Duncan Strong, director of the Ethnogeographic Board. The papers will be published in full in the *American Anthropologist*.

At its centenary the American Ethnological Society passed the following resolution:

Be it resolved: that the American Ethnological Society, for 100 years dedicated to the study of peoples not belonging to Western Civilization, express upon the occasion of its centenary celebration its profound conviction that racial persecution and discrimination can not be scientifically justified. We protest the distortion of anthropology which falsely assigns inborn superiority to some one "race" and assigns others to inborn inferiority. Ethnological studies rouse enthusiasms for the inventions and social life of many peoples of all races and make it impossible to assent to the dogma that civilization depends upon the enslavement of one race by another.

The society was greatly honored at its centenary dinner by the presence of Albert Gallatin, great-grandson of its founder. The president, Harry Shapiro, presided. Albert Gallatin had also been instrumental in the establishment of New York University, and a congratulatory letter was read from the present chancellor of the university, Harry Washburn Chase. The society was also extremely fortunate in having as dinner speakers Clark Wissler, who served many years as secretary, president and director, and Franz Boas, who has been editor of the society's most important publication series since 1906, and to whom the society is indebted for its present organization along scientific lines.

MARIAN W. SMITH,
Secretary

COLUMBIA UNIVERSITY

REPORTS

ANNUAL REPORT OF DR. JESSUP, PRESIDENT OF THE CARNEGIE CORPORATION

DR. WALTER A. JESSUP, in his first annual report as president of the Carnegie Corporation of New York, announces that during the year 1941–42 grants totaling $2,831,650 were voted by the trustees "for the advancement and diffusion of knowledge." Of this sum, $533,565 was given for activities directly related to the war. The largest new grant made for war purposes, $100,000, has enabled the Joint Army and Navy Committee on Welfare and Recreation to conduct a variety of experimental programs as a basis for the activities of the Special Service Division of the War Department. Allocations amounting to $12,500 to the American Council on Education were made to keep colleges and universities informed of the personnel needs of defense agencies and, conversely, to inform these agencies of the manpower resources of educational institutions. Grants of $75,000 and $50,000 were also made to the Red Cross and the United Service Organizations, respectively, in support of their emergency activities.

President Jessup contrasts the present program of the corporation with that carried on during World War I:

The first World War came at a time when the Carnegie Corporation was hardly more than an institutionalized extension of Mr. Carnegie's personal philanthropy. Its administrative machinery was new and its program still in the making. Its direct contribution to that first great national crisis of the twentieth century took the form of generous gifts to outstanding private agencies which had undertaken to supply the amenities of life to men in the army camps. Appropriations to other Carnegie enterprises more actively concerned in the war effort and to the National Research Council were also voted in recognition of emergency responsibilities beyond their normal resources.

The present picture differs in many essential respects from that earlier one. In the first place, the Corporation in the period since 1918 has granted $140,800,000 to various agencies and institutions which share its concern for the advancement and diffusion of knowledge. Many of these agencies and institutions are now in a position to render direct and useful services to the Government. Secondly, the public has been educated to support the social service agencies which were the chief recipients of the grants made in 1917 and 1918, and they no longer look to the foundations for any substantial portion of their operating income. Finally, the very business of making war has changed. War now involves not only the professional soldier and the professional diplomat, but the scholar, the technician, the scientist, and the administrator as well. Success in modern war requires mobilization of all the nation's intelligence. In this kind of war, the foundation, which in the course of its normal peacetime activities has enjoyed peculiarly close relations with scientists and scholars, can play a useful role within the terms of established policies.

It has been interesting and on the whole encouraging to discover that by and large the research agencies and the professional associations which had come of age before the present war and with which the corporation has long cooperated are making substantial contributions to the war effort.

UNIVERSITY AND COLLEGE GRANTS

Over a period of years, the corporation has contributed substantial sums for the development of

libraries and for study and research in colleges and universities. During the current year, three major grants were made to the following institutions: $150,000 to the new University Center in Atlanta, and $100,000 each to the Johns Hopkins University and to New York University. Development grants of $30,000 each were made to the universities of Maine and Vermont and to Colby and Southwestern (Tenn.) colleges, and a similar grant of $25,000 was voted to the University of the South. Commenting on these grants, President Jessup says:

> The war has created new problems for all American institutions, but few of them have suffered more stresses and strains than the university and the college. The budget-making of these institutions has been complicated by steady declines in enrolment. In certain fields, on the other hand, such as physics, chemistry, engineering, medicine and some of the social sciences, the difficulty of maintaining adequate teaching staffs has grown day by day. The attempt to revise regular programs to meet urgent Government demands for technically trained men has put a heavy strain on administrator and teacher alike. The skill and speed with which the colleges and universities have adjusted to all these new pressures have done much to justify the enormous investment of public and private funds which they represent. From coast to coast requests for instruction and for campus space in which to house soldiers and sailors during periods of special training have been met promptly, often at the cost of doubling already heavy teaching schedules and crowding regular students out of dormitories and fraternity houses.

For continuation of cooperative work with a selected list of graduate and undergraduate schools in developing criteria for admission and in providing a basis for judgment as to ability of those already admitted to candidacy for degrees, two grants totaling $65,000 were made to the Carnegie Foundation for the Advancement of Teaching.

Adult Education and the Arts

In the field of adult education the corporation voted the sum of $150,000 to the New York Academy of Medicine for the support of its services to the public and the medical profession, and $24,000 for continuation of the program of the Council on Foreign Relations in promoting discussion and study of international problems. Grants totaling $37,500 were made to the Canadian Association for Adult Education.

In the arts, a terminal grant of $48,000 was made to the Association of American Colleges for its program to bring to colleges and universities in small communities some of the cultural advantages of metropolitan institutions and to provide interchange of staff members. Also grants ranging from $2,500 to $15,000 were made to the Universities of Alberta, Nebraska, Virginia and Wisconsin, and to Vanderbilt University. Other grants included $30,000 to assure continuation of a music center as a division of the Pan American Union; $36,000 to the Metropolitan Museum of Art; and $20,000 to the New York Museum of Science and Industry.

Libraries and Research

Since its establishment in 1911, the corporation has granted some $30,000,000 or one sixth of its total income for library enterprises, in addition to the $43,000,000 given by Mr. Carnegie to help establish free public and academic libraries. With few exceptions, the 2,507 libraries made possible by these grants are now supported by the local communities which they serve. President Jessup states: "Every citizen, therefore, may take pride in the part which public libraries are playing in the war effort. In addition to organizing special collections on war information and civilian defense and providing up-to-the-minute reading lists, libraries in many cities have assumed the role of community centers, registering blood donors and air raid wardens, organizing forums and discussion groups, and providing reference service by telephone and mail for hard-pressed officials and businessmen."

The major grant for library interests during the current year, $75,000, was made to the University of Chicago Graduate Library School. Other grants included $25,000 for the development of the library of the Marine Biological Laboratory at Woods Hole, $10,000 in further support of the system of fellowships recently inaugurated by the Library of Congress; and a total of $55,800 to eleven technological colleges for rounding out book collections.

For general research, the Brookings Institution received $50,000 for support of its program, and the National Bureau of Economic Research grants totaling $55,000 for general support and for projects relating to the national emergency.

Except for the support of enterprises in the Dominion of Canada, no appropriations are being made by the trustees from the special fund created by Mr. Carnegie for work in the British Dominions and Colonies, because of the difficulties of administering and conducting projects during the war.

Three Decades of Giving

The report concludes with an analysis of a summary, made by the secretary of the corporation, Robert M. Lester, of total grants made by the corporation since 1911. During three decades the corporation has made gifts totaling almost $185,000,000, falling into three classifications: grants totaling more than $70,000,000 made to agencies or enterprises established by Mr. Carnegie, or growing from them, such

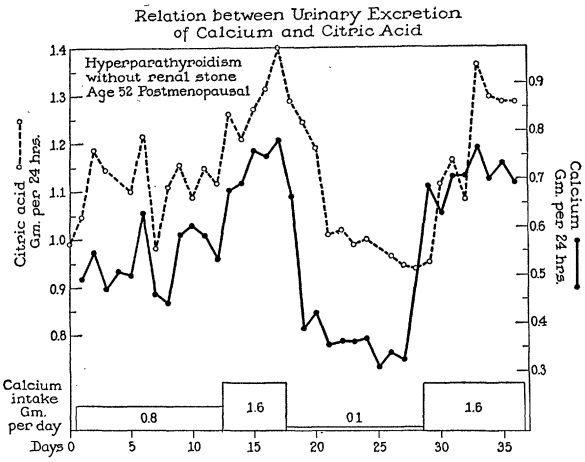
as the Carnegie Institute of Technology and the Carnegie Foundation for the Advancement of Teaching; grants amounting to some $48,000,000, made to 848 universities, colleges and schools; and grants totaling about $50,000,000 made to 777 associations, museums, libraries and agencies for research and study.

SPECIAL ARTICLES

THE RELATION BETWEEN THE URINARY EXCRETION OF CITRIC ACID AND CALCIUM; ITS IMPLICATIONS FOR URINARY CALCIUM STONE FORMATION

A SATISFACTORY explanation still remains to be provided for the constant appearance of considerable amounts of citric acid in urine which would relate it functionally to specific metabolic processes. Citric acid appears to be a product of endogenous metabolism; and three factors have hitherto been recognized as influencing its excretion. Alkalosis, however induced, leads to an increased output which usually varies directly with urinary pH. Excretion is also increased by the administration, best intravenously, of citrate or citric acid precursors of the dicarboxylic acid series such as succinic, fumaric and malic acids. A recent study from this laboratory[1] has shown that citric acid excretion is also under the control of the steroidal reproductive hormones. There is a characteristic cyclic alteration of urinary citrate in the different phases of the menstrual cycle; the lowest levels occur during menstruation, the highest at about the middle of the cycle; in hypogonadal subjects, estrogens elevated, androgens depressed, the urinary level. The significance of these several correlations remains obscure; in alkalosis, citrate may contribute in small measure to the buffer system of urine; and it may represent an excretion product of intermediary carbohydrate metabolism.

The purpose of the present note is to report observations on human subjects which have revealed a relationship between the urinary excretion of citric acid and calcium by virtue of which the renal excretion of citrate may serve a specific and useful function. Variations in urinary calcium excretion were induced in male subjects and in post-menopausal women by variations in the diet and, in one subject with hypoparathyroidism, by parathormone injections. Menstruating women were not included in this series to avoid the complications arising from the hormonally conditioned cyclic variations in citrate excretion characteristic of the menstrual cycle, which, from preliminary experiments, appears to be independent of the calcium factor. Parallel changes in the calcium and citrate content of the urine were uniformly observed under these conditions. The concomitant increases or decreases in both urinary constituents were of approximately the same magnitude. They were most striking when sudden significant changes in urinary calcium excretion could be obtained, as in the case of hyperparathyroidism illustrated in Fig. 1. That the changes in calcium excretion influenced the level of citrate excretion, rather than the reverse, was apparent from studies in which citrate excretion was markedly increased by the intravenous administration of sodium citrate without a significant concomitant alteration in the calcium output.



Some implications of this urinary calcium-citrate linkage may be considered briefly. The extensive literature on the influence of the citrate ion on calcium is in general agreement that, at alkaline pHs, the presence of the citrate ion enhances the solubility of the calcium by the formation of a soluble negatively charged calcium-citrate complex and a reduction in the concentration of calcium ions.[2] On the acid side also, the presence of the citrate ion results in citrate complexes which are favorable to a greater total solubility of calcium.

These considerations have already influenced thinking with respect to the formation and solution of calcium stones of the urinary tract. A citric acid-sodium citrate mixture has been employed with some success for the solution, by lavage, of calcium phosphate stones in the urinary tract.[3] A low citrate excretion has been reported in subjects with renal and bladder calculi,[4] although the factor of infection

[1] E. Shorr, A. R. Bernheim and H. Taussky, SCIENCE, 95: 2476, 606, June 12, 1942.

[2] F. C. McLean, *Physiol. Rev.*, 18: 495, 1938.

[3] F. Albright, H. W. Sulkowitch and R. Chute, *Jour. Am. Med. Asn.*, 113: 23, 2049, December 2, 1939.

[4] B. Kissin and M. O. Locks, *Proc. Soc. Exp. Biol. and Med.*, 46: 216, 1941.