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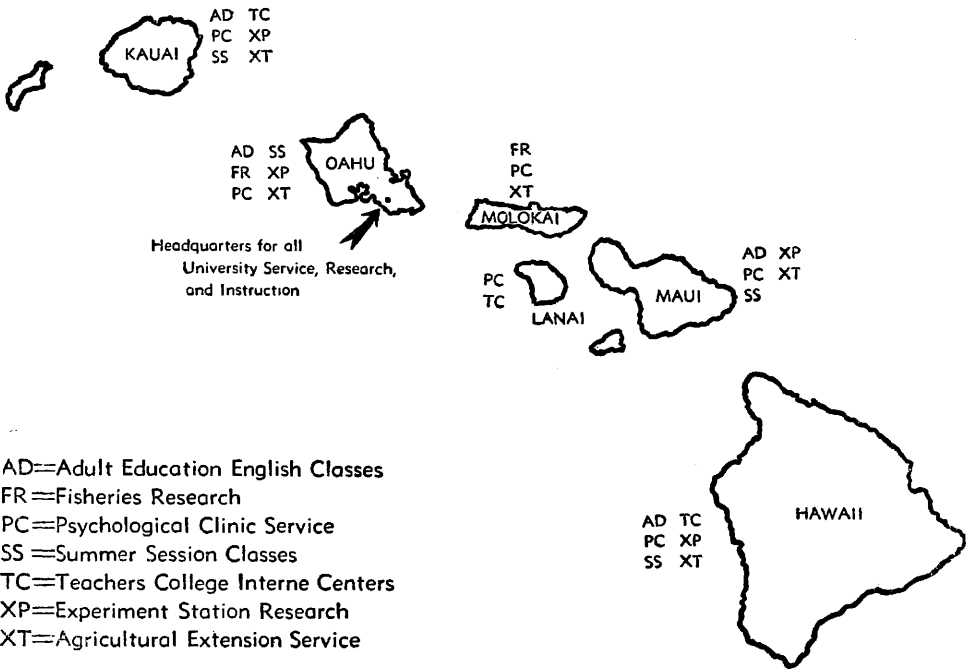
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UNIVERSITY OF HAWAII BULLETIN

Volume XXIV

Number 1

December 1944



UNIVERSITY SERVICES, RESEARCH, AND INSTRUCTION

1943-1944

The Report of the President

FOR FISCAL YEAR JULY 1, 1943 TO JUNE 30, 1944

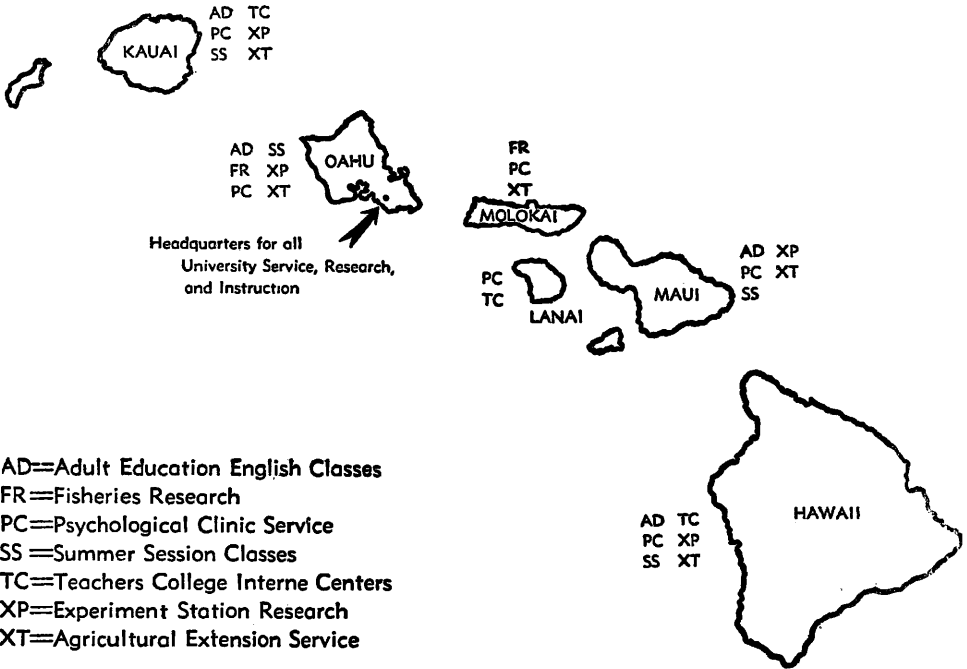
UNIVERSITY OF HAWAII BULLETIN

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UNIVERSITY SERVICES, RESEARCH, AND INSTRUCTION

1943-1944

The Report of the President

FOR FISCAL YEAR JULY 1, 1943 TO JUNE 30, 1944

The Map on the Cover and the Title Page

THE MAP OF THE TERRITORY ON THE COVER AND THE TITLE PAGE shows localities in which the University served the people directly and in which it conducted research during the fiscal year 1943-44. Here are details amplifying the information on the map:

AD is the symbol used for the Adult Education Service. It stands alongside the islands on which or from which this service offered non-credit courses, off-campus credit courses, correspondence courses, and Americanization and English language courses for persons deficient in English. Of these Americanization and English language courses there were nine on Hawaii, six on Maui, twenty-four on Kauai, and twenty-two on Oahu.

FR shows where the University, in cooperation with the Board of Agriculture and Forestry, studied commercial fish ponds with a view to increasing their productivity.

PC shows that services of the Psychological Clinic were offered on six major islands.

SS stands alongside the islands on which Summer Session classes were held—at Hilo on Hawaii, at Wailuku on Maui, at Lihue and Waimea on Kauai, and at Honolulu on Oahu.

TC shows the locations of Teachers College interne teaching centers, where fifth-year students teach in public school classrooms under University supervision. There are two such centers on Hawaii and one each on Lanai and Kauai.

XP stands for the Hawaii Agricultural Experiment Station. On Oahu the Station has its headquarters, a farm, and a branch station in Honolulu, a farm at Poamoho; and macadamia nut orchards on property of cooperating land owners at Aiea and Waipahu. On Kauai it has two macadamia nut orchards on privately owned lands at Lihue. On Maui it has a branch station at Makawao and mango and litchi orchards on land of a cooperating landowner at Lahaina. And on Hawaii the Station has a branch station at Keauhou and a macadamia nut orchard on privately owned land at Hawi.

XT shows where the University's Agricultural and Home Economics Extension Service has offices. Oahu has the headquarters office and the South Oahu district office on the campus in Honolulu; and other district offices at Kaneohe and Wahiawa. Molokai has a district office at Kaunakakai. The Maui office is at Kahului and the Kauai office at Lihue. Hawaii has district offices at Hilo, Captain Cook, and Kohala.

Honolulu, Hawaii
December 1, 1944

To the Governor and the Legislature
of the Territory of Hawaii

Gentlemen:

I take pleasure in submitting to you my report as President of the University of Hawaii for the fiscal year July 1, 1943, to June 30, 1944, and a record of degrees, diplomas, and certificates conferred during the same period. Transmission of the report directly to you has been authorized by the Board of Regents of the University.

Respectfully,

GREGG M. SINCLAIR
Executive Officer, Board of Regents

The Report of the President

HAWAII, LIKE THE REST OF THE NATION, has been shaken out of its provincialism by the war. A new world is in the making, a world as different from the old as the Renaissance was different from the Dark Ages. The war has destroyed so much of Europe that the rebuilding of the merely physical will absorb most of the people's time, for our generation, at least. Yet, there is hope for a people who have endured intensive modern war for five years; they will survive "into" a new world. Europe's influence will not be so great as it has been. World values have been changed by the upthrust of great Asiatic countries, such as China and India, and the new emphasis upon nations and places like Russia and Siberia, the Philippines, Malay, Indo-China, Dutch East Indies, Oceania, Australia, and New Zealand. Whether we will or no, the United States will play its part in this century on an international stage.

THE WAR has made such changes in world economy and world emphasis that Hawaii's position will be much more important than it used to be. One statesman has declared that Hawaii is worth a thousand battleships to the United States, but our islands will be more than a military outpost. Hawaii will grow sugar, pineapples, mangoes, litchis, papayas, cinchona, and other tropical plants. It will again be a tourist playground. But Hawaii will be more than a tropical garden and a resort. Future industrialization in Asia seems to be a certainty, with the probable result that China and India will trade on a large scale with the United States. Hawaii will be important in this interchange of goods; it may become the middleman between East and West. It will be an axis of Pacific transportation, both by ship and plane. As a center

of transportation, trade, and commerce between two great hemispheres, Hawaii's economic future is assured.

In the opinion of some authorities, the exchange of goods will be less epoch making than the exchange of ideas. For a young culture like America's to come into direct contact with the vital old cultures of Asia may result in a revaluation of ideas. Our achievements in experimental science and in the republican form of government will undoubtedly influence forward-looking persons in the new democracies of Asia. And Asiatic achievements in art, literature, philosophy, languages, in leisurely living—though it be basically aristocratic—will furnish us with new perceptions. If one of our major problems of the future is the conflict of cultures or the adjustment of conflicting cultures, can we not learn much from

India's history, where the problem has existed over a great number of centuries?

THE MAJOR ACTIVITIES OF THE UNIVERSITY

TWENTY-FOUR YEARS AGO, the University of Hawaii began its work in Asiatic studies, and its interest has grown with the years. With the coming of peace, the University should have an adequate program in this field to offer to its students.

In the following pages are described briefly, the major activities of the University (1) in Instruction, including professional and preprofessional training; (2) in Research, as carried on by the instructional faculty, the Experiment Station, the Psychological Clinic, and the Volcano Laboratory; and (3) in the extension services, both the Adult Education Program and the Agricultural Extension Service. In addition to the descriptions given of accomplishments in these various categories, there is much more that should be put down in order to give an accurate idea of the work of the University. With 2,204 enlisted men attending credit and non-credit courses on the campus, with soldiers, sailors, and marines continually visiting the United States Armed Forces Institute in the basement of Hawaii Hall, and with the Entertainment Section of the Special Service Division housed on the campus, we are ever cognizant of the immediacy of war.

MANY EX-STUDENTS IN ARMED FORCES

AS THE FISCAL YEAR ENDED our Service Flag had 1,012 stars, of which 21 were gold. Our students and graduates have given a good account of themselves. They have lived up to the best traditions of the Amer-

ican military services; they have added to those traditions. Letters from them indicate that they are fighting on a wide variety of fronts. Former students of Japanese ancestry have fought as American citizens and as American citizens they will return, and take their places in our community. As one of these alumni puts it: "We are Americans. We expect no special favors not granted to other soldiers. We did no more than our duty, and we are grateful for the opportunity that our country gave us to fight for what we believe to be right."

YEAST AN EXAMPLE OF UH HELP IN WAR

AS AN EXAMPLE of the less obvious of the University's contributions to the war effort, the research work of the Department of Bacteriology may be cited. It has rendered various services of a cooperative, experimental, or advisory nature to local firms and organizations in their scientific pursuits. Notable among these organizations have been the Aiea Naval Hospital, the Office of Food Production of the Office of Civilian Defense, various units of the Army, and the firm of Metcalf and Eddy, whose problems with the City and County of Honolulu have concerned the public welfare of the people of the Territory. The primary project, however, has concerned the commercial production of high grade baker's yeast from molasses at the plant owned and operated by the Honolulu Plantation Company, Aiea, Oahu. This plant was designed at the time of its installation for the purpose of providing a high vitamin yeast product for supplementary cattle feed; but, as the civilian population of Honolulu and the number of service personnel in the Territory increased, the need for a

plentiful supply of fresh yeast that would satisfy baking requirements was realized. It was in the promotion of this objective that Dr. Oscar N. Allen, Professor of Bacteriology, was invited by the Plantation officials in July, 1943, to assist in an experimental and advisory capacity.

Significant progress made in the yeast project may be summarized in two points: (1) the selection, development, and use of a special strain of baker's yeast, and (2) the adoption of standard culture methods and fermentation controls comparable to the best practices of a modern yeast plant. A yeast strain for many years identified as A-14 in the culture collection of the Department of Bacteriology is now being used in the manufacture of the commercial yeast. Cordial and complimentary cooperation between the University and the Plantation staff has helped to further this study. At the present time the yeast product has passed the standard baking requirements and the factory is approaching full production under much improved conditions. This project holds promise of being the basis for a new industry in Hawaii—an industry that will benefit the rapidly enlarging Pacific area.

LARGE ENROLLMENT EXPECTED AFTER WAR

THE COUNCIL OF DEANS has assumed responsibility for coordinating work of the committees appointed to study various phases of postwar planning. This procedure seems to be consistent with the principles underlying the organization of the instructional service of the University. It utilizes the services of the members of the instructional staff in those capacities for which their training and experience have qualified them. It leaves the coordination of their find-

ings to the group whose function it is to coordinate all instructional activities.

Preliminary discussions of the University's postwar problems seem to indicate that many more students will apply for admission than can be cared for with present facilities. Therefore, the Council of Deans has suggested that, other factors being equal, the University would give preference in admission to (1) service men who are residents of the Territory, (2) other residents of the Territory, and (3) service men who are not residents. Our postwar plans will be given further attention in the coming year.

GIFTS RECEIVED— BONDS PURCHASED

THE UNIVERSITY has received during the year gifts valued at \$29,650.46. The chief donors were the Oahu Railway and Land Company, \$1,500.00; the Strong Foundation, \$5,000.00; the Sears Roebuck Foundation, \$1,500.00; and the Samuel N. and Mary Castle Foundation, \$19,803.46. In addition, \$2,094.75 was added to the Hemenway Hall Building Fund, mainly as contributions from students.

An incomplete survey of the bond purchases of our faculty and staff during the biennium shows the total bonds purchased to be \$172,206.00, an average of \$956.66 per individual.

NEW SCHOLARSHIPS IN ENGINEERING

CHARLES L. EATON, of the Continental Trailer and Equipment Company, gave the University six scholarships of \$150 a year each for students in the School of Engineering. They are to be known as the Elizabeth L. Eaton Scholarships. First awards were made for the academic year

1943-44. They are to be awarded for a period of four years.

FISHERIES RESEARCH PROJECT UNDERTAKEN

IN COOPERATION with the Board of Agriculture and Forestry, the University has undertaken a fisheries research project that should be of great ultimate value to the Territory. The project embodies research in (1) ponds, (2) off-shore areas, and (3) deep-sea areas, with first emphasis on ponds. Dr. Lowell E. Noland came from the University of Wisconsin in February for a six months' stay to advise on research methods and techniques. Professor C. J. Hamre, chairman of the Department of Zoology and Entomology, is secretary of the fisheries project executive committee, which consists of two representatives from the Board of Agriculture and Forestry—President Colin G. Lennox and Executive Secretary Joseph L. Dwight; and two representatives of the University of Hawaii—President Gregg M. Sinclair and Dean Paul S. Bachman. Professor Hamre is also secretary of the group doing the fisheries research which includes personnel from the Zoology and Entomology, Botany, and Geology Departments of the University, and from the Board of Agriculture and Forestry.

COMMITTEE SURVEYS SUGAR CURRICULUM

A COMMITTEE of business men, plantation managers, and University professors has investigated the adequacy of our sugar technology course and has made certain suggestions for its improvement. Some of the proposed changes in the curriculum cannot be made before the war ends. The consensus of opinion is that our Agriculture students should be trained to work with machines, so that they

will know how to utilize machinery to the best advantage on small farms or on plantations.

REGENTS VISIT MAUI, KAUAI, AND HAWAII

IN ACCORDANCE with Legislative Act 133, Governor Ingram M. Stainback appointed a new Board of Regents in September, 1943. The Honolulu members of the Board and the years in which their present appointments will end are: Philip E. Spalding, president of C. Brewer and Company (1945); J. Frank McLaughlin, judge, United States District Court (1947); Fred K. Lam, physician and surgeon (1947); and Willowdean C. Handy, ethnologist (1945). Maui is represented by Marquis F. Calmes, Maui business man (1945); and Hawaii and Kauai by J. Scott B. Pratt, manager of Kohala Plantation (1947), and William P. Alexander, manager of Grove Farm (1947), both of whom are alumni of the University. Mr. Spalding was elected chairman, and Judge McLaughlin, vice-chairman of the Board. Myrtle S. Brodie acted as secretary pro tem for the September meeting; at the October meeting, Dean Paul S. Bachman was elected secretary.

The Board has held monthly meetings throughout the year. In November they met at the Agricultural Experiment Station Farm on the slopes of Haleakala on Maui; in April they met on Kauai. The Agricultural Experiment Station Farm in Kona was selected for the July meeting.

The University and its policies were discussed at public meetings and receptions held during the Regents' visits to Maui and Kauai. These meetings and other discussions have helped the Regents to become familiar with

the Territorial-wide aspects and multitudinous activities of the University.

ORGANIZATION PLAN WORKS EFFICIENTLY

THE PLAN OF ORGANIZATION of the instructional service of the University which went into effect July 1, 1943, has functioned smoothly and efficiently during the past year. The system of coordinating all instructional service through the Dean of Faculties and the Council of Deans has made it possible for the departments to supply impartially the curricular needs of the colleges.*

STAFF REPLACEMENTS COMPLICATED BY WAR

THE PROBLEM of obtaining competent persons to fill vacancies in the instructional staff has presented unusual difficulties during the past year. Uncertainties about student enrollment and the attendant revenue from student fees have made it difficult to determine the number of positions that should and could be filled. The number of competent persons available for employment has been greatly reduced. The high cost of living in the Territory, the housing shortage, and transportation uncertainties have further complicated the problem. In spite of these obstacles, it has been possible to obtain the services of competent persons to fill most of the vacancies.

Of the ten instructors appointed to the rank of Assistant Professor or above, all but three had Doctor of Philosophy degrees. Of these three, one had the highest degree in his field—the Civil Engineer degree; another had completed all but the dissertation for a Doctor of Philosophy degree;

*A handbook for Instructional Staff has been published and may be obtained from the Office of Publications.

and the other works in the field of household art, in which a doctorate is not usually required. All had had previous college teaching experience. Of the sixteen people appointed as instructors, all but one had a Master's degree or better. The one exception was a registered nurse. All instructors had had previous teaching experience either in college or high school, with the exception of one whose services have not been retained. In all, there were thirty-eight appointments to full-time positions on the instructional staff and thirteen resignations or extended leaves of absence. In addition, there were thirty-one appointments as lecturers, of whom twelve had served as lecturers on previous occasions. It should be pointed out that many appointments were the result of re-instituting programs that had been suspended by the war, such as the preschool program. The greatest number of appointments was in the English Department, where an effort is being made to strengthen the program in remedial speech.

The problem of having an adequate instructional staff to handle the influx of students at the close of the war deserves serious consideration by the University administration, the Regents, and the Legislature. Many of our faculty members now on leave cannot be released from service immediately after the end of the war. Other institutions will be competing at that time for college instructors. If lack of funds should cause our staff to be seriously depleted during the course of the war or prevent the University from obtaining the services of promising instructors when the opportunity arises, the program of the University in the postwar period would be greatly handicapped. A faculty committee has been appointed to estimate the probable needs for in-

structional staff immediately following the close of the war, and every effort is being made to locate prospective instructional staff members who are now engaged in war work but who will be available for employment immediately after the war.

The President appointed a Standards Committee with the Dean of Faculties as chairman. This Committee studied methods of improving the standards of instruction from the point of view of faculty and student performance. Their report was later approved by the University Senate. It is planned to put as many of the Committee suggestions into operation next year as is possible under wartime conditions.

RECORD OF CHANGES IN FACULTY AND STAFF

APPOINTMENTS to the instructional staffs of the colleges from July 1, 1943, to June 30, 1944, were as follows: Donald Abbott, Assistant in Zoology; Isabella Aiona Abbott, Assistant in Botany; Esther M. Anderson, Instructor in Education; Genevieve Arnold, Instructor in English; Robert K. Atkinson, Lecturer in Social Work; Alladine Bell, Instructor in English; Agnes C. Bickerton, Instructor in Dental Hygiene; Arthur P. Bouvier, Assistant Professor of English; Robert C. Brasted, Instructor in Chemistry; Elizabeth Krauskopf Bushnell, Assistant Professor of Bacteriology; Elizabeth B. Carr, Instructor in English; Toy Len Chang, Lecturer in Home Economics; Louise S. Childs, Lecturer in Education; Lily Pao-Hu Chong, Lecturer in Chinese; Robert W. Clopton, Assistant Professor of Education; Mervyn I. Conner, Lecturer in Dental Hygiene; Lorna Jarrett Desha, Lecturer in Geography; Hubert Everly, Instructor in Education; David T.

Fullaway, Lecturer in Entomology and Zoology; Katherine Bazore Gruelle, Assistant Professor of Home Economics; Grace C. Hamman, Lecturer in Health and Physical Education; Akiyoshi Hayashida, Lecturer in Japanese Language; Robert Hiatt, Assistant Professor of Zoology; Nancy Jackson, Assistant in English; Edna K. Kaneshige, Assistant Director of Food Service; Sara Kleinschmidt, Lecturer in Public Health Nursing; Henrietta C. Krantz, Instructor in English; Katharine Lackey, Instructor in English; Richard K. C. Lee, Lecturer in Public Health Nursing; Gilbert G. Lentz, Professor of Public Administration and Director of Legislative Reference Bureau; James Y. T. Leong, Lecturer in Business; Margery MacLachlan, Lecturer in Nursing; Ward Madden, Instructor in Education; Oei Maehara, Assistant in Education; Evangeline Marshall, Lecturer in Home Economics and Assistant Director of Food Service; Charlotte E. Mees, Instructor in Home Economics; Lowell E. Noland, Visiting Professor of Zoology; Olive M. Northwood, Lecturer in Nursing; Hisako Ogawa, Assistant in Zoology; Takeshi Okano, Assistant in Chemistry; Sumi Okawa, Instructor in English; Dorrit C. O'Neal, Assistant in Education; Carol Orne, Lecturer in Speech; Edna Lee Pegram, Instructor in Education; Myrtle Freeman Peterson, Assistant in Education; D. Hebden Porteus, Lecturer in Social Work; Jacqueline B. Reid, Instructor in English; Gilbert L. Sandritter, Lecturer in Social Work; William M. Shanahan, Lecturer in Public Health Nursing; Ethel E. Smith, Assistant Professor of Education; Janet Smith, Associate Professor of Education and Principal of Preschool; Vernon E. Smith, Lecturer in Dental Hygiene; Louise S. Prado, Assistant in Education; Hal-

Iye F. Spurkel, Lecturer in Art; Pauline G. Stitt, Lecturer in Public Health Nursing; Doris Tilden, Assistant in Education; Robert Vetlesen, Lecturer in Music; James Wahl, Lecturer in English; Vandalia Baker Wall, Instructor in English; Elizabeth T. Watson, Lecturer in Art; C. L. Wilbar, Jr., Lecturer in Public Health Nursing; Julia S. Wilson, Instructor in Mathematics; Samuel M. Wishik, Lecturer in Public Health Nursing; Beatrice Wong, Lecturer in Home Economics; Helene Wong, Instructor in English; Harley H. Zeigler, Professor of Religion.

Those who were appointed to positions in the Hawaii Agricultural Experiment Station were: Carroll I. Draper, Associate Poultry Husbandman; Charles K. Fujimoto, Assistant in Chemistry; Eva Hartzler, Associate Nutritionist; J. Walter Hendrix, Assistant Pathologist; Dilworth D. Jensen, Assistant Entomologist; Haruyuki Kamemoto, Assistant in Horticulture; Harold William Kirch, Junior Horticulturist; John S. McFarlane, Assistant Horticulturist; Nobuyuki Nakasone, Assistant in Chemistry; George Uohara, Assistant in Horticulture; Donald Van Horn, Assistant Agronomist; and E. L. Willett, Associate Animal Husbandman.

The following people were appointed to positions in the Extension Service: Douglas E. Baldwin, Acting County Extension Agent; Charles M. Bice, Poultry Specialist; Joseph Henry Boyd, Associate Specialist in Truck Crops and Horticulture; Masaaki James Doi, Assistant County Agricultural Agent; Ruth A. Eyres, County Home Demonstration Agent; Genevieve M. Feagin, County Home Demonstration Agent; Paul A. Gantt, Specialist in Animal Husbandry; Herbert M. Hiroshige, Acting Assistant Specialist in Agricul-

tural Economics; Dolores McCarty, County Home Demonstration Agent; Keichi Mihata, Assistant County Agricultural Agent; Yukio Dick Sumida, Assistant County Agricultural Agent; Motoi Ueda, Assistant County Agricultural Agent; Winifred H. Watanabe, Assistant County Home Demonstration Agent; and Winslow Williams, Assistant Specialist in Agricultural Economics.

Henry N. Peters was appointed Clinical Psychologist in the Psychological Clinic.

We record with regret the following terminations of service on the University faculty and staff:

Resignations.—In the Instructional faculty: David D. Bonnet, Instructor in Zoology; Lucinda Bukeley, Instructor in English; Louise S. Childs, Lecturer in Education; Florence M. Henderson, Assistant Professor of English; Shao Chang Lee, Professor of Chinese Language and Literature; Nora W. Mark, Instructor in Home Economics; Takeshi Okano, Assistant in Chemistry; Jacqueline B. Reid, Instructor in English; Martha S. Reilly, Instructor in Home Economics and Director of Food Service; Theodore Searle, Instructor in Physical Education; Madorah E. Smith, Assistant Professor of Education and Psychology; Arthur E. Wyman, Associate Professor of English;

In the Experiment Station staff: Lyman A. Dean, Associate Chemist; Tamotsu Kubota, Assistant in Plant Pathology; Nobuyuki Nakasone, Assistant in Horticulture; Lily U. Shaw, Associate in Horticulture; George Uohara, Assistant in Horticulture; Kisako Yanazawa, Junior Assistant in Nutrition; Ruth K. Yoshida, Associate in Chemistry;

In the Extension Service: Clara Blank, County Home Demonstration Agent; Elsie Hayashi Hara, Assistant

County Home Demonstration Agent; Nellie G. Huffine, County Home Demonstration Agent; Moto Machida Okawa, Assistant County Home Demonstration Agent; and Winslow Williams, Assistant Specialist in Agricultural Economics.

Military Leaves of Absence.—In the Instructional faculty: Donald P. Abbott, Instructor in Education; Earle Ernst, Assistant Professor of English; Hubert Everly, Instructor in Education; Esther M. Lound, Instructor in English; R. Ray Scott, Associate Professor of Education;

In the Extension Service: Robert C. Eckart, County Agricultural Agent; Jushin Kaneshiro, County Agricultural Agent; Kenichi Murata, Assistant Specialist in Economics; and James Shigeta, Assistant County Agricultural Agent.

Other Leaves of Absence.—In the Instructional faculty: Lorraine F. Fitzsimmons, Instructor in Education; Guy C. Omer, Jr., Instructor in Physics; and Harold St. John, Professor of Botany; and in the Extension Service: Charles M. Bice, Poultry Specialist; Tsumika Maneki, Assistant County Agricultural Agent; and Howry H. Warner, Director.

HIGH QUALITY MARKED YEAR'S CONVOCATIONS

THERE WERE fewer convocations this year than last, but those held were of high quality. Navy Day was celebrated in the Outdoor Theater, where the presence of the Honorable Alva E. Steadman, Chairman of Navy Day for the Territory, and the stirring speech by Vice-Admiral Robert L. Ghormley, made the occasion noteworthy. A Navy Band, under the direction of Warrant Officer Vance, United States Navy, played. Punahou, Mid-Pacific Institute, Sacred Hearts Academy, Maryknoll, and

Saint Francis students were guests of the University. In Farrington Hall, on Wednesday, November 24, Dr. William H. Fry, Superintendent of the Methodist Board of Missions in Hawaii, gave an address concerning Thanksgiving. The Phi Kappa Phi Day convocation was held December 16 in Farrington Hall, with President Oscar F. Shepard, of Punahou, as speaker. At that time Charles R. Hemenway, former chairman of the Board of Regents, commended the University's response to the call for volunteer interpreters. On March 1, in Farrington Hall, Philip E. Spalding, Chairman of the Board of Regents, and Melvin C. Robbins, Territorial Director of the Office of Price Administration, spoke on inflation. Senior Day was celebrated May 9 on Hawaii Hall terrace. President Sinclair presented the Senior awards following speeches and orations by the students.

Dr. J. Leslie Dunstan's Baccalaureate address, "The Inner Life and the Outer Road," was given at Central Union Church on June 4. Judge J. Frank McLaughlin gave the Commencement address on June 9; his subject was "The University for Hawaii." At that time the University presented honorary degrees to three distinguished members of the community—a Doctor of Laws degree to Charles R. Hemenway, a Doctor of Science degree to Otto H. Swezey, and a Doctor of Science degree to Admiral Chester W. Nimitz.

UH STUDENTS QUICK IN ACQUIRING CULTURE

A SURVEY of the general culture status of students in the University of Hawaii was completed. The test used was the Cooperative General Culture Test, Form S, prepared and distributed by the American Council

on Education. It includes six sections—one each on the general fields of Current Social Problems, History and Social Studies, Literature, Science, Fine Arts, and Mathematics. Having been administered to a large number of students in selected mainland liberal arts colleges and teachers colleges, the test provides a basis for comparing local students with those in attendance at other American universities and colleges. At the time it was given here, 1,014 regular full-time students were attending the University. Of these 1,002 took the test. All but seven of the 1,002 had entered the University from one of the local secondary schools; consequently, the results are representative of the local situation.

An analysis of test results revealed the following facts:

1. Men students averaged from twenty-five to thirty points higher than did women students. This is in exact conformity with mainland experience with this test.

2. Freshmen in the College of Arts and Sciences and in Teachers College averaged eleven points below Freshmen from selected mainland institutions, while local Seniors averaged nine points below mainland norms. (Fourteen to fifteen points represents the average mainland improvement from year to year.)

3. Local Teachers College students averaged from one point as Freshmen to three points as Seniors above the mainland norm.

4. Freshmen entering the University from rural high schools averaged about four points lower than did those entering from urban high schools.

5. The difference between Freshmen entering from Honolulu public and from Honolulu private high schools was less than one point.

6. University of Hawaii students made their poorest performance on the Mathematics section, and their best performance on Literature.

7. The greatest variation in scores was recorded for the section on Fine Arts. Freshmen scored five points below, whereas Seniors were one-half point above the mainland norm for this part of the test.

In general, it can be stated that University of Hawaii students in the College of Arts and Sciences and in Teachers College (1) in their freshman year are some three quarters of a year behind the norm of mainland results on this test; (2) make more than mainland normal progress during their college careers; and (3) finish a little less than one half year behind comparable mainland students. No norms were available for such an evaluation of students in the College of Applied Science. However, Freshmen in this college performed about the same as other local Freshmen, whereas Seniors, as would be expected upon consideration of the highly specialized nature of their courses, ranked significantly lower. This does not hold true, of course, in the subtests on Science and Mathematics, where these students rated well above the mainland norm for liberal arts and teachers college students.

HOUSING OF STUDENTS A DIFFICULT PROBLEM

THE RESPONSIBILITY of assisting women students to obtain suitable housing during their attendance at the University is that of the Office of Student Personnel. It is, in fact, one of the most important functions of that office, because the effectiveness of the academic functions of the teaching staff is dependent upon a student's being housed where there is an opportunity to study, free from noise and interruption.

The problem of finding suitable housing has become difficult. Former landlords of rooming houses have, in most instances, chosen to rent to war workers. As a result, women students have had to be placed in private homes to work as maids in order to obtain room and board. Although

this is a form of employment for students found in many university communities, it is only fairly satisfactory in Honolulu. A plan has been inaugurated to standardize hours of work, wages, duties, and responsibilities. Nevertheless, even after employers have agreed to certain terms, some look upon the student employee as a servant of menial status and make inroads upon his time beyond that stipulated in the initial agreement, with the result that the student has few hours free for study and cultural and social contacts. Difficulties frequently result when non-university sponsors of students from Maui, Hawaii, Kauai, and other islands make housing- and work-arrangements for them without knowledge of university standards of study and work loads, and when students answer newspaper advertisements for maids. The University must place itself in a position to exercise advisory control over each such placement, except in those cases in which the parents agree to assume full responsibility.

The one University dormitory for women, Hale Laulima, houses twenty-nine paying residents and a Home Economics student who majors in institutional management and serves as house manager. When students are selected for this house, an effort is made to maintain a proportionate representation by islands (excepting Oahu for the present), colleges, classes, and racial ancestry. Because so little dormitory space is available, it was considered desirable for the immediate future to restrict a student to a maximum residence period of two years in Hale Laulima and to require her to earn a C average for the first year of residence in order to be eligible for a second year's residence there. The limit on the length of residence

is undesirable. Its chief value is to give a larger number of our women students experience in the value of University housing.

A few women students reside in privately operated "dormitories," usually also occupied by high school pupils and full-time employed persons. There is no established working relationship between the operators of these dormitories and the staff members of the Office of Student Personnel.

Parents of some students who live at home are urging that their daughters live in University dormitories. It has been considered impossible at the present time to admit such students to Hale Laulima, even though University dormitory life would doubtless increase the effectiveness of the student's college experience. We need—and need badly—dormitories for our students.

LIST SHOWS WHERE STUDENTS CAME FROM

THE FOLLOWING SUMMARY shows how many students registered in the year 1943-44 came from each of the Hawaiian islands, the states, and foreign countries:

Oahu, 1,145; Hawaii, 184; Kauai, 137; Maui, 135; Lanai, 5; Molokai, 3;

Arkansas, 1; California, 24; Colorado, 9; Connecticut, 5; Delaware, 1; Florida, 3; Georgia, 2; Idaho, 5; Illinois, 20; Indiana, 6; Iowa, 6; Kansas, 3; Louisiana, 1; Maine, 1; Maryland, 4; Massachusetts, 10; Michigan, 11; Minnesota, 5; Mississippi, 1; Missouri, 5; Montana, 2; Nebraska, 5; Nevada, 1; New Hampshire, 1; New Jersey, 4; New Mexico, 1; New York, 30; North Carolina, 2; North Dakota, 1; Ohio, 14; Oklahoma, 1; Oregon, 2; Pennsylvania, 16; Rhode Island, 1; South Carolina, 2; South Dakota, 1; Tennessee, 1; Texas, 8; Utah, 3; Virginia, 4; Washington, 6; West Virginia, 1; Wisconsin, 6; District of Columbia, 2;

China, 1; Thailand, 1;

Total, 1,849.

At the 1944 Commencement, 163 degrees were awarded, including 53 for which work was completed in September, 1943. Of these, four were Master of Arts, one Master of Science, three Master of Education, fifty-six Bachelor of Arts, thirty-five Bachelor of Science, and sixty-four Bachelor of Education degrees.

STUDENT-INSTRUCTOR RATIOS IN ARTS SHOWN

THE YEAR 1943-44 saw an increase in total enrollment in the College of Arts and Sciences, although that of the two upper classes continued to decrease. Table 1 shows the distribution of enrollment by departments and per instructor in the fall semesters of 1941-42 and 1943-44. The total enrollment rose from 438 in 1942-43 to 530 in 1943-44, but the senior class dropped from 65 in 1942-43 to 56 in 1943-44; the junior class decreased from 81 to 71; the sophomore class almost doubled, jumping from 88 to 131; and the freshman class rose to 272 in 1943-44 from 204 in 1942-43. This last figure lacks only 23 of equaling the pre-war enrollment of 295.

It would seem that as the tension in Hawaii is lessened by the steady movement of the war zone westward, more recent high school graduates are turning their attention to immediate higher education. In contrast, the constant appeal of unusual economic opportunities and the ever-present draft combine to produce a steady decline in the upper University classes. It is, of course, still too early to tell just how much effect the reduction of the draft age to eighteen years will have upon the next incoming class.

With the intention of insuring a more comprehensive background for all students in the College of Arts

and Sciences, the faculty of the College recently voted to require four of the following courses: Anthropology 120, Economics 150 or 151, Philosophy 150, Psychology 150, Religion 150, and Sociology 151. These, in addition to two years of English, two years of another language, a year of science, a semester of American history, and a semester of American government, provide an acquaintance with most of the fields of knowledge represented in a liberal education. The present world turmoil emphasizes, as nothing else could, the danger of a narrow, highly specialized training devoid of the liberalizing influence of the arts. There is a real danger that the technical competence being achieved by the present intensive training programs given in the military services may blind us to the larger values of a liberal education.

ENROLLMENT HIGHER IN APPLIED SCIENCE

THE ENROLLMENT in the College of Applied Science in 1943-44 was larger than that in the previous year. The largest percentage increases were in the premedical, engineering, and agriculture classes.

During the year, the Department of Public Health Nursing was changed to the Department of Nursing, and the College was authorized to offer a program of studies leading to the degree of Bachelor of Science in Nursing. The major may be in Public Health Nursing or in Nursing Administration and Education. As the University does not conduct its own school of nursing, the professional work may be taken at any accredited school of nursing. The closest affiliation is with the Queen's Hospital School of Nursing, but graduates of other accredited schools are accepted for the degree course.

TABLE 1
RATIO OF STUDENTS TO INSTRUCTORS (FULL-TIME EQUIVALENT) BY DEPARTMENTS
1941-42 AND 1943-44, FIRST SEMESTERS ONLY

Department	Number of Instructors		Number of Courses or Sections		Total Registration in Courses		Average Number of Students per Course		Number of Students per Instructor	
	1941-42	1943-44	1941-42	1943-44	1941-42	1943-44	1941-42	1943-44	1941-42	1943-44
Agriculture	3.00	1.75	10	5	188	71	18.8	14.2	46.0	40.6
Anthropology and Sociology	4.00	1.75	16	5	577	449	36.1	89.8	144.3	256.6
Art	3.00	1.75	13	7	239	134	18.4	19.1	79.7	76.6
Bacteriology	1.50	1.00	4	3	154	94	38.5	31.3	102.7	94.0
Botany	4.50	3.00	12	7	242	156	20.2	22.3	53.8	52.0
Chemistry	7.25	6.00	24	16	613	503	25.5	31.4	84.6	88.8
Economics and Business	4.00	3.25	15	14	811	324	54.1	23.1	202.8	99.7
Education	8.50	5.25	41	21	847	357	20.7	17.0	99.6	68.0
Engineering and Mathematics	8.50	5.50	33	22	726	571	22.0	26.0	85.4	103.8
English	26.50	15.75	145	82	2,307	1,678	15.9	20.5	87.1	106.5
Geology and Geography	2.25	1.00	8	4	309	185	38.6	46.2	137.3	185.0
Health and Physical Education	10.25	6.00	49	28	1,273	872	25.9	31.1	124.2	145.3
History and Government	5.25	3.25	24	14	1,101	842	45.9	60.1	209.7	259.1
Home Economics	5.75	5.00	16	12	482	296	30.1	24.7	88.8	59.2
Languages, Asiatic and Pacific	3.50	2.75	14	12	425	256	30.4	21.3	121.4	93.1
Languages, European	5.00	3.00	25	16	521	407	20.8	25.4	104.2	135.7
Music	2.75	0.50	12	2	229	44	19.1	22.0	83.3	44.0
Nursing	1.50	0.25	5	1	25	57	5.0	57.0	16.7	57.0
Philosophy	2.00	0.50	8	2	194	94	24.2	47.0	97.0	94.0
Physics	3.50	1.00	17	6	181	111	10.6	18.5	51.7	111.0
Psychology	2.75	1.50	15	6	498	305	33.1	50.8	180.4	203.3
Social Work	2.50	2.75	7	8	125	119	17.9	14.9	50.0	43.3
Zoology and Entomology	5.00	4.25	11	6	259	206	23.5	34.3	51.8	48.5

For many years it has been possible for a student to become a medical technologist by taking three years of work in the General Curriculum and a fourth year of specialized work at a mainland school for medical technologists. Now a student may also take his last year here. The University will offer a complete program at the University and in the city, thus making it unnecessary for local students to go to the expense of taking part of the work on the Mainland. Dr. Eric A. Fennel, a Honolulu physician and pathologist and president of the Hawaii Territorial Medical Association, has accepted a position as Director of this program, and under his leadership and guidance it will become one of the important professional divisions of the general program of studies.

As in former years, the Engineering testing laboratory has been used by employees of the United States Engineers Department and the Public Works Department of the Navy. The same courtesies, as in former years, have been extended to the City and County of Honolulu and to the Territorial Department of Public Works.

It is expected that during 1944-45 male enrollment at the University will drop to a new low point; but plans for the immediate and distant future should be made. Both our needs and our opportunities deserve attention. Among Hawaii's needs is (1) Safety Engineering, a field that has been neglected here. We should have classes in the use of safety devices and courses acquainting workers with the dangers from unprotected machinery, fumes from gases, and from contact with chemicals. (2) More work in mechanical engineering must be offered. The work must be expanded to include not only chem-

ical engineering, as recommended last year, but also mechanical engineering. Work of this type must be available for students in Agriculture; the future agricultural graduate should have some knowledge of the mechanical equipment that will be used on the plantations. The future Smith-Hughes teacher should be well grounded in mechanized farm work. The graduates of Smith-Hughes high school courses will be the future tractor drivers, the repair men, and the crane operators. (3) One of our opportunities, about which there has been some discussion, is the establishment of a school of tropical medicine, offering only graduate and research work, to be affiliated with, or a department of, the University.

TEACHERS COLLEGE MEETS ITS OBLIGATION

DESPITE wartime restrictions and handicaps, Teachers College continued throughout the academic year 1943-44 to meet its obligation of teacher preparation for public school service in Hawaii.

Although somewhat increased over the previous year, enrollment continues below prewar levels. Despite the urgent need for teachers, it has not been deemed advisable to lower standards, and this decision has kept the enrollment down. For example, only 70 new Freshmen were admitted in 1943, whereas the normal quota of beginning students has been 100.

Acceleration of student degree programs has continued to be a feature of University wartime service. Under this provision, which includes a longer than usual Summer Session, prospective teachers have been able to complete the normal five-year program of preparation in three and a half years. This acceleration has been

of definite value in that it has enabled us to provide almost as many new teachers annually as were provided during a similar period before the war, despite the reduction in enrollment.

The preschool unit, closed at the beginning of the war, was reopened in September, 1943. The establishment of the public school kindergarten program made this reopening imperative. The principal and two supervisors being unable to obtain transportation from the Mainland, the unit had to operate shorthanded for the First Semester. However, through the elementary school's cooperation in lending a member of its staff and in meeting other exigencies, an adequate preschool program was carried on. The preschool unit is now housed in a new building purchased from Punahou School, under Act 55 of the 1943 Legislature. Although only a year old, this new unit has won a place for itself in the community, judging from the long list of parents wishing to register their children for the preschool program.

Few changes have occurred in the elementary practice school. All members of the staff report that the past year has been the best year in the history of the school from the standpoint of satisfactory work accomplished. In the two public schools used for practice laboratories, a change was made in organization when it was found that the large classes of heterogeneously grouped children were beyond the ability of practice teachers to handle. The accelerated program results in students' beginning practice teaching with less than desired maturity, but their professional attitude and effort have done much to offset this handicap.

Interne teaching for half of the fifth year has continued in four schools on Hawaii, Lanai, and Kauai, as a means of alleviating the acute teacher shortage. Despite some inconvenience to students and supervisors, the plan has worked out fairly well. It has made available the service of all fifth-year students throughout the year in actual teaching positions and has enabled Teachers College to maintain its standard of teacher preparation. It has, on the other hand, increased the load of the Education Department personnel who have had to make periodic visits to these centers. This practice will probably be continued until more teachers are available, but should not be regarded as a permanent plan.

The training of dental hygienists, provided from 1926 to 1930 in the Normal School and again from 1935 to 1939 in Teachers College, was re-established in the fall of 1943 at the request of the Department of Public Instruction. It was supported, as formerly, by the Strong Foundation. Several young women are now receiving the training necessary to fill needed positions in our public schools.

The new speech program, instituted in the fall of 1943, gives evidence of filling a real need. Under this plan, three members of the University English Department faculty are providing Teachers College students with their full-time service in speech development and correction. All students now have technical and corrective courses in speech and laboratory experience in the correction of speech defects in others. This new program in Teachers College will prove to be of lasting value.

PSYCHOLOGICAL CLINIC HANDLES MORE CASES

THE WORK of the Psychological Clinic reflects increased demands for assistance and direction in wartime problems of human adjustment. Last year (1942-43) the Clinic dealt with 1,392 cases, which were referred to it by almost every institution and public welfare agency in the Territory. In the past year (1943-44) the number of cases has risen to 2,358, which is an increase of 956 or nearly 69 per cent, in the service given. The prospects for the ensuing year indicate a further marked increase in case load, which will necessitate considerable expansion of the Clinic's staff if these demands are to be met. It is noteworthy that it is the other islands of the Territory, rather than Oahu, from which the increased requests for service have come.

HAWAII AGRICULTURAL EXPERIMENT STATION

THE RESEARCH PROGRAM of the Hawaii Agricultural Experiment Station during the past year paralleled the movement of the war. Now, after having passed through defensive and preparatory stages, it is going forward on many fronts despite labor and material shortages and a number of staff vacancies attributable to the emergency. Details of the work and complete results will be published in bulletins and circulars to appear during the coming months. This report describes briefly the year's accomplishments in various fields.

A significant event in vegetable crop research occurred when, by breeding and selection, the Station developed a tomato variety, HES 657, that is resistant to spotted wilt, is of good market quality, and is prolific in yield. Further work now in

progress may add, to this variety and to others, resistance to *Stemphylium* and nematodes. Breeding for rust-resistant pole green beans of high yield and quality is included in the Station's search for better varieties of vegetables. Improved stock of Pak Choy, a white mustard, was grown and distributed to farmers and seedsmen to replace seed formerly imported from the Mainland and the Orient. A model garden at the Station illustrated the practicability and productiveness of home gardens. It yielded vegetables at the rate of 60,000 pounds per acre per year.

Progress was made in several fruit and nut projects. Macadamia plants that were selected in 1936 and are now bearing indicate the importance of selection and asexual propagation of varieties with desirable characters. Early-bearing strains of solo papayas of excellent quality were developed and will be distributed to growers. The practicability of preserving litchis and mangoes by quick-freezing was demonstrated.

The promising new insecticide DDT (dichloro-diphenyl-trichloroethane) shows striking effectiveness in control of some of Hawaii's most destructive crop insects. Rose beetle, melon fly, cabbage webworm, tomato fruit worm (corn earworm), tomato bug, and white fly, will no longer be of primary concern to fruit and vegetable growers if results of preliminary trials made during the year are substantiated by further tests. Insect pests of tomatoes were effectively controlled by the use of a cryolite nicotine talc dust.

The Station's nutritionists made several studies of the ascorbic acid (vitamin C) content of Hawaiian fruits. They found that bottled guava juice lost approximately 30 per

cent of its original ascorbic acid content over a one-year storage period and that when it was opened the juice lost most of its ascorbic acid within 30 days. Mangoes of several varieties were processed differently at various stages of maturity and subjected to a hundred or more tests for ascorbic acid. Utilization by human subjects of ascorbic acid from papayas and guavas was studied in detail.

During the year several plantations adopted a principle developed by Dr. H. F. Clements of the Experiment Station staff for logging the growth of sugar cane. By this method, fertilizer and irrigation schedules can be adjusted to the needs of the crop. The principle is being adapted to papaya production and later will be applied to litchis and mangoes.

Studies of koa haole (*Leucaena glauca*), which causes loss of hair when eaten by rabbits, hogs, horses, and in some instances cattle, led to isolation and proximate identification of the toxic principle. Quantitative methods of analysis and means of reducing toxic effect were developed. The new information will make it safer to use this important forage crop.

In response to the need for conservation of imported feeds, the Station has continued its work on locally produced feeds for stock and poultry. Studies of garbage utilization resulted in improved methods of extracting marketable fats and of drying the residue for feed. In poultry research, readily available feeds such as processed and raw garbage, pigeonpea meal, algaroba bean meal, and molasses, proved to be valuable substitutes for imported feeds. Ducks and feeder pigs were shown to make weight gains on raw garbage. Dairy cows did not respond favorably to substitution of corn meal and urea

for soybean meal. However, in another test, feeding of leguminous roughages (pigeonpea and koa haole) resulted in a material saving of imported protein concentrates and no decrease in milk production. Grazing experiments in a paddock of fertilized Napier grass showed excellent rates of beef gain at a low cost for fertilizer and supplementary feeds. Application of fertilizer to the forage grass resulted in materially increased yields at low unit cost. It was found during the year that new strains of Napier grass from East Africa show promise of being unusually good varieties for cut forage and grazing. Equipment for mechanized cultivation and harvesting of robust forage crops such as koa haole, Napier grass, and guinea grass, was developed and demonstrated.

In the field of human parasitology, examination of 860 persons from 16 plantations on the island of Hawaii showed that incidence of leptospirosis, a rodent-borne disease, was highest among laborers in wet districts where the Norway rat occurs. This survey was financed by a grant from the Plantation Health Committee of the Hawaiian Sugar Planters' Association.

During the year, the scientists of the Experiment Station cooperated with the Agricultural Extension Service in carrying new facts to the farmers of the Territory. Studies of the storage and viability of forest tree and vegetable seeds were carried on with the cooperation of the Board of Agriculture and Forestry. Help and advice in storage procedure and tests of viability were furnished to the Director of Food Production. Two hundred or more persons visited the tomato breeding plots at the Poamoho Branch of the Experiment Station. Staff poultrymen as-

sisted in conducting poultry schools on Oahu, Maui, and Hawaii. Seeds of the tomato variety HES 657 were supplied to farmers throughout the Territory. The Agronomy division helped the Board of Agriculture and Forestry with a corn project on Molokai.

Publications reporting detailed results of the Station's work are available to interested persons. Bulletins, Progress Notes, and Circulars in the following list are published by the Station. Technical Papers appear in local and mainland scientific journals and periodicals.

The following publications were published during 1943-44:

BULLETINS

- No. 92. Henke, L. A. *Roughages for Dairy Cattle in Hawaii*. October, 1943.
 No. 93. Hosaka, E. Y., and Ripperton, J. C. *Legumes of the Hawaiian Ranges*. March, 1944.
 No. 94. Potgieter, Martha. *The Adequacy of Diets of 38 Honolulu Families on Relief*. June, 1944.

PROGRESS NOTES

- No. 36. Miller, Carey D., Louis, Lucille, and Yanazawa, Kisako. *Vitamin Values of Hawaiian Grown Fruits and Vegetables*. Revised June, 1944.
 No. 39. Ayres, A. S. *The Preparation of Poultry Feed and the Recovery of Fats and Oils from Garbage*. October, 1943.
 No. 40. Pierson, K. W. *Preliminary Experiments on Feeding Processed Garbage Meal to Poultry*. October, 1943.
 No. 41. Holdaway, F. G., and Look, W. C. *Studies on the Control of Beet Webworm, Hymenia recurvalis (Fabricius)*. April, 1944.
 No. 42. Draper, C. I. *Utilization of Raw Garbage by Growing Ducks*. June, 1944.

TECHNICAL PAPERS

- No. 111. Clements, H. F., and Kubota, T. *The Primary Index, Its Meaning and Application to Crop Management with Special Reference to Sugar Cane*. December, 1943.
 No. 112. Work, S. H., and Henke, L. A.

The Utilization of Urea and Soybean Oil Meal Nitrogen by Steers. December, 1943.

TECHNICAL BULLETIN

- No. 1. Ayres, A. S. *Soils of High-Rainfall Areas in the Hawaiian Islands*. September, 1943.

THE AGRICULTURAL EXTENSION SERVICE

THE AGRICULTURAL EXTENSION SERVICE of the University of Hawaii and United States Department of Agriculture, cooperating, continued in 1943-44 to discharge its responsibility of taking to farms and farm homes as many improved practices in agriculture and homemaking as possible.

This teaching was accomplished primarily through demonstrations. Other devices used included home and farm visits, lectures, bulletins, agricultural and home economics circulars, charts, radio talks, and newspaper and magazine articles.

Obviously, each farm and farm home cannot be visited by a county agent often enough to bring about the adoption of all practices recommended by the Hawaii Agricultural Experiment Station and similar stations elsewhere. It is, therefore, necessary to organize farmers and their wives into University Extension Clubs, and their children into Boys' and Girls' 4-H Clubs. These clubs hold monthly or semi-monthly meetings at which the county agents, or local leaders trained by the county agents, demonstrate better farming or homemaking practices.

When these practices are adopted by club members, their neighbors benefit through learning from them, which increases the effectiveness of the work of the county agents.

The 1943-44 Extension Service staff consisted of: (1) in the agricultural section, nine county agents,

fifteen assistants, and twelve technical workers; (2) in the home economics section, nine senior home demonstration agents, five assistants, and two technical workers; and (3) twenty-two stenographers and clerks.

The administrators, twelve technical workers, and ten stenographers and clerks were stationed at the University of Hawaii; the field force was distributed on the five principal islands of the Territory.

During the past year, the Extension Service carried seven projects, namely, Agricultural Economics, Animal Husbandry, Horticulture, Poultry, Foods and Nutrition, Home Management, and Clothing.

Director H. H. Warner was lent to the Office of Economic Warfare for eight months of the year. Although no official reports have been received of his work, there can be no doubt that Mr. Warner and the men working with him have given a good account of themselves in the production of fresh food stuffs close to the fighting lines. These crops go to men of the armed services in the Southwest Pacific area.

The educational program conducted by the county agents included the following activities:

1. Assisting with the food and feed crop plantings of sugar plantations throughout the Islands. The plantations heretofore had been producing only sugar, but during the present emergency many sugar lands have been converted to the production of truck crops, such as Irish and sweet potatoes, beans, cabbage, carrots, corn, Kafir corn, etc.

2. Developing home gardens among plantation employees on land provided by the plantations.

3. Assisting with home food production among the rural families. Projects among the rural people included (a) home gardens; (b) home production of bananas, papayas, etc.; and (c) maintenance of poultry, swine, and dairy cattle despite the shortage of feed.

4. Intensifying the work with farms in order to increase, or at least maintain, normal

production of truck crops, beef, pork, milk, poultry, and poultry products.

5. Assisting Civilian Defense agencies in the installation of Victory Gardens.

6. Assisting schools and hospitals with garden problems.

7. Assisting military groups with garden activities. On Oahu many Army and Navy gardens received their first start as the result of assistance from Extension agents prior to December 7. Extension agents gave such demonstrations as preparation of seed flats; proper mixing of soil, manure, and sand; seed treatment; and fertilizer placement.

8. Crop enumerating. Because of the importance of increased crop production, Extension agents have been devoting considerable time to enumerating acreages of various crops.

9. Continuing 4-H Club activities. Work with 4-H clubs is now chiefly in the realm of home gardens, small livestock, and poultry and rabbit projects.

10. Continuing leader training meetings and University Club meetings, demonstrations, and farm and home visits. Extension Clubs have served as nucleuses for neighborhood groups in rural areas and have been widely used for quickly disseminating information regarding General Orders and Defense Rules.

In addition, the county agents have assisted other governmental agencies as follows:

1. Office of Price Administration with (a) gasoline rationing for farmers (although this work has now been taken over by the Office of Price Administration, the recommendations of county agents are still required on all applications from farmers for gasoline); (b) tire and tube rationing; (c) price control.

2. Office of Food Production with (a) issuance of seed and insecticide permits and seed distribution; (b) sale and control of poisons, insecticides, fungicides, fertilizers, sprays, and dusts; (c) rationing of poultry feed, temporarily on Kauai; (d) the making of surveys of acres available for crop planting; farm machinery; livestock and poultry; farm feed and stock; feed and seed on hand in wholesale and retail stores; chemicals, fertilizers, insecticides, and fungicides on hand; (e) participation in food and feed administration committee work in the solution of marketing feed and other problems; (f) evacuation of farmers from areas taken over for

military purposes; (g) food production by serving as Deputy Food Production Administrator temporarily on Maui; as Assistant Food Administrator temporarily on Kauai; and as assistants or advisors in offices of Food Administration on the different islands; (h) the informing of farmers of boats available for shipping produce to Honolulu markets; and (i) the distribution and slaughter of livestock, particularly hogs.

3. Selective Service Boards in regard to the deferment of agricultural workers.

4. Office of Defense Transportation with the organization of trucking pools.

5. Office of Foreign Funds Control with farmers' problems arising out of the freezing of alien assets.

6. Bureau of Internal Revenue with income tax reports of farmers.

7. Alien Property Department by aid given to the Alien Property Custodian, etc.

8. Office of Military Governor, G-2, by (a) acting as language interpreters; (b) interpreting to farmers, rules and regulations of the Military Governor, and later of the Civilian Governor and Officers of Civilian Defense, on the sale of food, feed, seed, insecticides, fungicides, fertilizers; (c) holding Americanization meetings at which Japanese farmers were urged to destroy Shinto shrines and alienate themselves from Japanese customs and habits; (d) helping to organize farmers to give and solicit funds for the American Red Cross, to make donations of blood, to buy War Bonds, and to serve in various Civilian Defense capacities; (e) serving on various emergency committees, selective service boards, rationing boards, etc.

9. Office of Civilian Defense (a) in conferences of farmers, Civilian Defense officials, police authorities, and others in the various problems affecting or requiring the cooperation of farmers; and (b) by interpreting to farmers rules and regulations of the Military Governor, and later of the Civilian Governor and Officers of Civilian Defense, on the sale of food, feed, seed, insecticides, fungicides, fertilizer, etc.

10. War Production Board by helping farmers in getting priorities for trucks, tractors, farm machinery, and other types of equipment and building materials.

A brief summary of Extension Service activities is given in the data listed below:

Farm visits made 47,520
Office and telephone calls made 38,611

Bulletins and circulars distributed 21,429
Attendance at method demonstration meetings 13,748
Attendance at result demonstration meetings 205
Attendance at other meetings 19,056
Farms on which new practices were adopted as a result of county farm agents' work 5,958

The Foods and Nutrition project received the greatest emphasis in the Home Economics Program. The diets of families throughout the Territory are steadily improving, but they still are low in calcium and vitamin B₁.

Since the war began plans have been made to give guidance to a much larger number of both rural and urban families in meeting the emergencies of wartime living by encouraging the adoption of improved home practices and living standards.

By June, 1944, families had made notable progress (1) in keeping physically fit through improved food habits and an adequate diet; (2) in helping to meet their own food needs by greater home production and preservation; (3) in using to best advantage the foods available, through good meal planning and conservation of food values in cooking and preparation; (4) in adjusting family living to meet conditions caused by the drain which war and industry have made upon man- and woman-power; (5) in carrying their full share in all war campaigns, including buying and selling War Bonds and doing Red Cross work.

Up-to-date information in various phases of home economics was distributed through many channels — newspapers, four radio stations, farm visits, neighborhood leaders, members of University Extension and 4-H Clubs, child and maternal health conferences, mothers of kindergarten children attending the public schools,

Red Cross Canteen and Nutrition Class members, and Girl Scouts and Reserves. A summary of this distribution of information is given in the following data:

Number of home visits made	6,851
Number of bulletins distributed	25,554
Number of articles published in newspapers	286
Number of radio programs broadcast	109
Number in attendance at method demonstrations in 1944	25,616

It is estimated that there were 20,354 adoptions of recommended practices. Some of the more important ones are summarized in the following data:

Recommended Practices Adopted	Number of Families Cooperating
Provided needed storage space	61
Improved kitchens	28
Repaired furniture	462
Selected needed equipment	166
Improved diet	5,415
Solved problems in food preparation	5,710
Produced more food at home	1,665
Preserved food at home	3,770
Solved problems in child feeding	2,595
Kept home accounts	482

ADULT EDUCATION HAS 4,301 REGISTRANTS

THE ADULT EDUCATION SERVICE enrolled 4,301 individuals in classes and correspondence courses.

The most popular of the non-credit campus courses were Military Japanese, Navigation (both surface and aerial), Chinese, Spanish, Photography, English Composition and Speech, and all branches of mathematics and engineering.

Of the 568 enrollments in college credit correspondence courses, 361 were received after November 1, 1943, when the contract between the University and the War Department started to function. Under this plan enrollments are received through the United States Armed Forces Institute, and half the tuition and textbook costs for service personnel enrolled in high school and college courses sponsored by the University are paid by the Federal government. The other half is paid by the student in service.

Registrations in non-credit afternoon and evening classes meeting twice a week for eight weeks begin-

TABLE 2
NUMBER OF INDIVIDUALS, EXCLUDING DUPLICATES,
ENROLLED IN ADULT EDUCATION COURSES 1943-1944

	Civilians	Service Personnel	Total
Credit extension class, Kohala, Hawaii	12		12
Non-credit extension classes, Oahu	22	18	40
Non-credit afternoon and evening classes on the campus	1,008	932	1,936
College credit correspondence courses (new enrollments not carried over from previous year)	62	506	568
High school correspondence courses (new enrollments not carried over from previous year)	78	89	167
Americanization and basic English classes at 61 centers on Oahu, Hawaii, Maui, and Kauai	1,579		1,579
Totals	2,756	1,545	4,301

ning in June, 1944, indicate the kind of instruction which the community desires. Table 3 shows that Photography and Elementary Japanese classes were attended by the largest number of persons. Chinese, Industrial Electricity, Industrial Relations, and Voice and Diction were the classes having the next highest enrollments.

During the past year, 29,736 United States Armed Forces Institute correspondence lessons, ranging from academic and vocational high school courses to college level mathematical and technical courses, were corrected by forty-five teachers, whom we engaged and paid under a contract with the United States Government. These are distinct and separate courses offered and handled by the United States Armed Forces Institute, Central Pacific Area branch, and are not to be confused with the correspondence courses offered by the University of Hawaii.

Only about half as many reels of our own films were distributed this year as last, and thirty-one instead of thirty-seven schools in the Territory availed themselves of the film rental service. The drop on Oahu may be ascribed to gasoline rationing resulting in the inability of teachers to use their gasoline to call for the films at the University. Elsewhere, schools equipped with sound projectors have continued their use of films because of the speed-up in delivery since air express has been available. We distributed, without service or rental charge, fifty-three Office of War Information motion pictures dealing with the war on the home and battle fronts to about seventy-five schools, churches, Army and Navy posts, community organizations, and others, totaling 648 separate showings to audiences aggregating 219,494 persons. Perhaps our efforts along this line helped Hawaii go "over the top" on each one of its

TABLE 3
REGISTRATION IN NON-CREDIT AFTERNOON AND EVENING CLASSES
MEETING TWICE A WEEK FOR EIGHT WEEKS BEGINNING JUNE 19, 1944

Name of Course	Civilian Enrollment	Service Personnel Enrollment	Total
Algebra IA	8	3	11
Algebra IB	16	7	23
Algebra IIB	12	6	18
Chinese I (2 sections)	47	29	76
Chinese II	17	4	21
Elementary Korean	34	11	45
German	4	6	10
Industrial Electricity	11	65	76
Introduction to Analytic Geometry and Calculus	17	23	40
Japanese I (2 sections)	7	92	99
Japanese II	4	11	15
Personnel and Industrial Relations	24	42	66
Practical English	15	26	41
Photography (3 sections)	8	100	108
Principles of Economics	7	30	37
Public Discussion	1	16	17
Solid Geometry	3	6	9
Spanish I	15	30	45
Spanish II	8	3	11
Spanish III	4	5	9
Strength of Materials	16	24	40
Trigonometry	17	33	50
Use of Slide Rule	11	49	60
Voice and Diction (2 sections)	27	38	65
Totals	333	659	992

War Bond quotas, for the films were largely used in connection with programs promoting this cause.

DR. JAGGAR COMPILES VOLCANOLOGICAL DATA

DR. T. A. JAGGAR, a world famous volcanologist, is in charge of Volcanology at the University. The work has continued as in 1942-1943, with concentration on preparation of manuscripts and on laboratory construction to safeguard valuable collections. Volcano Letter No. 481, published by the University, reviews researches and lists publications and accumulated manuscripts.

The material for publication includes a manuscript in the publisher's hands for a book of 384 pages, 4 color plates, 28 page plates, and 30 figures; the title is *Active Pacific Volcanoes*. The illustrated typescript will be used by the Government for current needs. A second manuscript, which has numerous illustrations, is being revised for publication as a bulletin of the Geological Society of America; it is entitled *Comparative Volcanology of the Caribbee Explorations 1902*.

Laboratory research of the year has dealt with abrasion hardness of materials. Ten procedures have been tested by constructing different instruments. The final instrument is an electric sclerometer with which hardness is measured in terms of resistance to expanded energy. A collection of steels and other metals, of Hawaii woods, and of plastics and minerals has been assembled and is in process of measurement.

With the financial assistance of the Volcano Research Association, the University built a volcanology laboratory in the basement of the Home Economics Building. Dr. Jaggar intends to place in the laboratory records and specimens that he has been

accumulating for fifty years and which are to become the property of the University. The laboratory, occupation of which was planned for July, will safeguard matter now kept in four wooden buildings and will expedite research.

UNIVERSITY LIBRARY SERVICE INCREASED

THE PAST YEAR has been marked by a number of changes and accomplishments in the University Library, all of them aimed at improving the service, increasing the efficiency, and strengthening the collections.

Dr. Carl G. Stroven, librarian, writes: During the year it has been possible to reorganize the staff of the Library in close agreement with recommendations of a special committee of the American Library Association, setting up clearly defined departments and collections, all under the direct supervision of the assistant librarian. This was done in order to unify the organization, to make it possible for staff members to devote their full time to specialized work, to eliminate the necessity of requiring clerical work of professionally trained personnel, and to provide for adequate supervision and coordination throughout the staff. Preliminary to the attainment of these ends, the duties of staff members were re-formulated, and four new positions—three for clerk-typists and one for a book mender—were set up and filled.

A change in the location of four of the collections, requiring the moving of nearly all the books in the Library, was carried out during the year. The government and state documents were moved to the west wing of the building, placing them conveniently adjacent to the rooms of the Legislative Reference Bureau;

the Teachers College Collection was transferred from the stacks to a suitable room on the second floor; the collection of biography was moved to the main reading room on the first floor, where its usefulness is increased by supplementing the general reference collection in the room adjacent; the collection of periodicals was centered in the first two main floor stacks, thus bringing together all periodicals formerly located in three separate places.

The Carnegie collection of recorded music, along with the Capehart phonograph, was transferred from the charge of the Library to that of the Office of Student Personnel. The collection is to be placed in Hemenway Hall, where, under expert supervision, it will provide the students with a high level of recreation and offer them opportunity to become acquainted with the world's great music.

Joining the staff this past year were: Miss Naomi Fike, first assistant in the Reference and Circulation Department; Miss Harue Morimoto, assistant in the Cataloguing Department; and Miss Gale Sakai, in charge of the Government Documents Collection.

The past year marked the completion of the faculty survey of the Library, begun three years ago under the direction of the faculty Library Committee, for the purpose of discovering such deficiencies in our library materials as might hamper the University's teaching, study, and research programs. The Board of Regents in 1942 allotted a special fund of \$20,000 to meet Library requirements as shown by the survey. Approximately six thousand volumes recommended by faculty members participating in the survey have been ordered. Most of those that are in

print have arrived; and most of those reported as out-of-print have been placed on want-lists with booksellers in New York and London.

During the year the Library has made noteworthy acquisitions, particularly in serial files of scientific societies and in standard reference sets. Mention should be made of a few that are outstanding:

A complete set of the reports of the "Challenger" expedition, a basic source for information on the marine biology of the South Pacific.

All numbers needed to complete our file of the publications of the American Oriental Society.

A complete file of the *Orchid Review*, a valuable British journal on orchid culture.

A continuation subscription to the annual volume of *The Engineering Index*.

Complete files of the several series issued by the Boston Society of Natural History.

A complete set of the British Museum subject indexes.

All the volumes necessary to complete our file of *The Annual Register*.

Sabin's *Bibliotheca Americana*, the great bibliographical reference work on books relating to America.

The Bradley Bibliography, a guide to the literature of the woody plants of the world.

The Library was unusually fortunate this past year in the number and value of its gifts. Special mention is made of the following:

Mr. J. Douglass Bond gave a large collection of journals of the American Chemical Society, enabling the Library to fill gaps in its files.

Mrs. George Castle gave a useful collection of about four hundred volumes, mostly in contemporary fiction, biography, travel, and poetry.

Dr. C. Montague Cooke, Jr., for the sixteenth consecutive year, presented the entire annual output of the Yale University Press.

Mr. Charles S. Crane enriched the Hawaiian collection by giving 772 pamphlets, many of them rarities.

From the estate of the late Ermine Cross the Library received about six hundred volumes of general literature.

Miss Ethel M. Damon presented an exceedingly rare and valuable file of *The Friend*, an early periodical of Hawaii.

Mr. Isuto Dewa, proprietor of the Hawaii Benrisha, gave the University Library his entire stock of books in the Japanese language, about five thousand titles, bound and unbound.

Mrs. Benjamin Marx gave a complete file of the Oxford University Press Society for *Pure English Tracts*.

Mrs. J. P. Morgan strengthened our collection on marine biology by giving an extensive file of the publications of the New York Zoological Society.

Dr. Steele F. Stewart gave copies of rare newspapers relating to the anti-slavery movement and the death of Lincoln.

The Territorial Board of Agriculture and Forestry transferred to the University Library a large collection of books and journals chiefly relating to tropical and semi-tropical botany.

The Territorial Supreme Court Law Library, with the transfer of 1,000 bound volumes, helped to make more complete our files of government documents.

A list of other donors follows:

Mrs. Donald P. Abbott
American Factors, Limited
Dr. Fred E. Armstrong
Dr. Paul S. Bachman
Mr. Bernard Baruch
Miss Janet E. Bell
Mr. Wendell Bennett
Bishop Museum
British Consulate
Mrs. Douglas Broadhurst
Mr. Raymond C. Brown
C. Brewer and Company
Canadian Social Science Research
Dr. A. J. Carlson
Carnegie Institution of Washington
Carnegie Endowment for International Peace
Miss Josephine Casann
Mr. S. N. Castle
Mr. Kwai-Sing Chang
Church of the Cross Roads
Claremont Colleges Library
Mr. John Bates Clark
Mr. and Mrs. Colin Clements
Cornell University
Miss Catherine Delamere
Mr. Frank Dillingham
Mrs. William F. Drummer
Dr. Willard H. Eller
Fisk University
Four Hundred Forty-Second Combat Team, Camp Shelby
Mrs. Walter F. Frear
Miss Margaretta Frisbee

Hawaii Agricultural Experiment Station
Hawaiian Board of Missions
Mrs. Charles R. Hemenway
Hawaiian Services
Mrs. Lenore Hoffman
Mr. Bernhard L. Hormann
Mrs. Martha Wood Hosch
Miss Charlotta M. Hoskins
Institute of Pacific Relations
International Relations Club
Miss Virginia A. Jones
Mr. Henry P. Judd
Dr. Arthur R. Keller
Mr. Harold William Kirch
Mr. W. T. Koehler
Miss Beatrice H. Krauss
Dr. F. G. Krauss
Mr. Noel Krauss
Library of Hawaii
Mrs. Nettie A. Lyman
McKinley High School
Miss Helen B. MacNeil
Dr. Bertha Mueller
Mr. Gensaku Nakamura
National Research Council
National Home Study Council
National Tuberculosis Association
Northwestern University
Ohio State University Press
Mr. Irving Olds
Mr. Stanley Orne
Dr. Harold S. Palmer
Mr. Irving Otis Pecker
Mr. J. Tice Phillips
Mr. Raymond Pitcairn
Pineapple Producers' Cooperative Association
Mrs. Irene Powers
Miss Mary Pringle
Punahou School Library
Mr. M. L. Horace Reynolds
St. Louis University
Dr. Harold St. John
Dr. Laura V. Schwartz
Scripps Institution of Oceanography
Miss Euphie G. M. Shields
Mr. Gregg M. Sinclair
Smithsonian Institution
Colonel Thomas M. Spaulding
Dr. Carl G. Stroven
Miss Harriet Suzuki
Miss Edith E. Swank
Mr. Wade W. Thayer
Dr. Alfred Tozzer
Tuberculosis Association of Hawaii
Universidad De Santo Domingo
University of Chicago Press
University of Illinois
University of Kentucky
University of Manchester
University of Minnesota
University of Nevada
University of Oklahoma
University of Wisconsin
Mr. Yukuo Uyehara
Wagner Publishing Company

Lt. Robert Wallihan
 Mrs. Fred Washburn
 Mr. R. Watumull
 Mrs. Galen Weaver
 Mr. Richard Welling
 Dr. Stewart Wilcox
 Mrs. Hubert Wood
 Mrs. I. Yamagata

During the year the Oriental Collection was greatly strengthened by the purchase of fifty standard but rare eighteenth century works on China in English and French, and by completing the file of the *Royal Asiatic Society Journal*.

In order to insure our eventually receiving important materials currently published in China, arrangements were made with a committee of the American Library Association to have these purchased now and shipped after the war. This was made possible by a fund of \$1,000 generously advanced by Dr. Fred K. Lam and a group of his friends.

Besides serving the University faculty and students, the University Library has rendered important aid to various offices of the armed forces. Having the largest collection of scientific and specialized books and serials in the Territory, the University Library since the outbreak of war has been able to supply these offices with needed information and to grant them extended loans of materials on Pacific and Oriental languages, anthropology, sociology, geography, chemistry, physics, engineering, bacteriology, and other subjects. Thus, the Library has contributed directly to the success of the war in the Pacific.

About 4,000 of the Library's 7,439 registered borrowers are from off the campus, many of them business and professional men requiring sources of specialized information not ordinarily available in private collections or public libraries. During the past year a special effort was made to inform librarians in the Territory

of the fact that the University Library stands ready to supply reference information and to loan books on subjects beyond the resources of their own libraries.

Noteworthy among other services to the Territory at large is the maintenance at the University Library of a union card list of periodicals and other serials in Honolulu libraries. Last year the Reference and Special Library Section of the Hawaii Library Association, under the chairmanship of Miss Charlotta M. Hoskins, head of circulation and reference at the University Library, began work on an extensive revision and expansion of this list. A large part of the technical work involved in completing and then maintaining this project will be done by the staff of the University Library. An indication of the usefulness of this list, even in its present incomplete form, is the fact that a copy has been made by representatives of the United States Army for location at Schofield.

During the past year, the faculty Library Committee has met every two weeks to consider the advisability of purchasing periodical subscriptions and expensive materials requested by members of the faculty or suggested by the Librarian and other members of the Library staff. It has been helpful also in offering profitable suggestions on matters involving general library policy.

A statistical summary of the University Library for the fiscal year 1943-44 follows:

GROWTH IN NUMBER OF BOUND VOLUMES

Total number of bound volumes added during the year . . .	10,031
Number of volumes added by purchase	5,619
Number of bound volumes added by gift	4,127
Number of bound volumes added by binding	285

INVENTORY, JUNE 30, 1944

*Total number of bound volumes	148,714
Total number of unbound parts	365,294
Number of current periodicals received	2,008

CIRCULATION

Total circulation	155,016
General circulation	70,994
Reserve book circulation, estimated	84,022
Number of borrowers	7,439

UNIVERSITY COMPILES HAWAII WAR RECORDS

JOINT RESOLUTION Number 6 of the 1943 Legislature established the Hawaii War Records Depository. The Resolution states, in part, that "it will be advisable, after the termination of the present war . . . to compile a history of Hawaii's part in such war," it designates the University of Hawaii as "the official depository of material, documents, photographs and other data relating to Hawaii's part in said war," and it makes it the duty of the University to collect and preserve such materials. The sum of \$10,000 was appropriated to pay the expenses of the project.

Mrs. Catharine P. Field was appointed to the position of Archivist. She began work August 1, 1943, and carried on the duties of her office with great fidelity and efficiency for eight months. She established relations between the War Records Depository and the local community on a cordial basis, visited government offices, business, professional, fraternal, and service organizations, collected a large amount of valuable material, and made arrangements for other material to be sent in. She assisted the chairman of the committee in de-

*Exclusive of 13,426 volumes in the library of the Teachers College Elementary School, heretofore included in the statistics of the Librarian's report.

vising a classification system with seventy-two main subject headings, under which all material, except newspapers and photographs, is filed. She also began the work of filing and indexing and got that work well past the experimental stage. Representatives of the Depository appointed for the three outside island counties are Miss Elsie H. Wilcox, Kauai, Mr. Ernest B. DeSilva, Hawaii, and Mr. Franklyn E. Skinner, Maui. These representatives serve without pay.

The President of the University had appointed a "Committee on Collection of War Documents," which consisted of the following fifteen members of the faculty: Dr. Oscar N. Allen, Miss Janet E. Bell, Mr. Harry Collins, Mr. Roy A. Goff, Mr. Bernhard L. Hormann, Dr. Thomas A. Jaggar, Mr. Ralph S. Kuykendall, Dr. Andrew W. Lind, Dr. Harold S. Palmer, Dr. Shunzo Sakamaki, Dr. E. V. Sayers, Dr. Laura V. Schwartz, Dr. Carl G. Stroven, Dr. Cheuk-Woon Taam, Mr. Yukuo Uyehara. From this group an executive committee of three was named: Mr. Kuykendall, chairman, Dr. Stroven, and Dr. Lind. In order that the Depository function as well as possible it was suggested that Mr. James Tice Phillips, President of the Hawaiian Historical Society, appoint an advisory committee to work with the University committee. He appointed Mr. Francis K. Sylva, Mrs. Willowdean C. Handy, Lt. R. D. Kauffman, and Mrs. Catharine P. Field, and included himself as a member ex officio. This committee has given valuable advice on technical and personnel problems.

Because of ill health, Mrs. Field resigned effective at the end of March. The subject of personnel to carry on the work of the War Records Depository was discussed with members

of the Legislative Holdover Committee and other community leaders. The Executive Committee then drafted a plan calling for a permanent staff of four full-time employees at salaries that would attract able people to these positions. This plan was approved by the Regents of the University and by the Legislative Holdover Committees. The latter made an appropriate recommendation to the Governor, and the Governor allotted an additional \$9,105 to the University for this purpose. The additional positions have been authorized by the Governor and details regarding their status have been taken up with the Civil Service Commission. The top position, equivalent to director, has been exempted from civil service and classification rules and will be put on a contractual basis.

Major Vivien M. Culver, United States Army, Retired, was appointed as Director to take office July 1.

During the interim between directors, members of the committee carried on the work. They assembled newspaper files covering the war period, beginning in 1939. Very substantial progress has been made along this line. The Depository has bound files of the *Honolulu Star-Bulletin* since December 1, 1941, and the *Honolulu Advertiser* since May 1, 1940, and it has been promised a bound file of the *Nippu Jiji* (now the *Hawaii Times*) from January 1, 1939. There are also incomplete unbound files of the *Hawaii Hochi* (now the *Hawaii Herald*) and of the leading newspapers on the other islands. The gaps in these files are being filled in gradually. The Depository has duplicate files of the *Honolulu Advertiser* and the *Honolulu Star-Bulletin* from December 1, 1941, to date, from which pertinent material is being clipped and filed.

The University has recently purchased a Micro-File Recordak, which it is expected will be of great assistance to the Depository in obtaining copies of documents and other material of which originals are not available.

UNIVERSITY COMPILES DATA FOR LEGISLATURE

WITH THE CREATION of the Legislative Reference Bureau by the Territorial Legislature during its regular session of 1943, there was established a new type of service for the Territorial Government and a new relationship between the University of Hawaii and the Territorial Government. By this Act, the University of Hawaii joined a long list of universities which are using their facilities and their professional personnel to aid the work of legislatures and to contribute directly toward the processes of sounder and more efficient government.

The Legislative Reference Bureau has as its primary objective to provide a means whereby technical assistance may be given, upon request, to members of the Legislature of Hawaii and to the Territorial departments in bill-drafting and in gathering materials for an intelligent and full consideration of legislative proposals. The Act creating the Hawaii Legislative Reference Bureau provides that its purpose shall be: (1) to assist the Governor and members of the Legislature by providing them with impartial and accurate information and reports concerning legislative problems; (2) to provide a comprehensive research service on legislative and administrative problems; (3) to secure reports of various Territorial officers and boards and to collect other books and periodicals designed to furnish information on cur-

rent or proposed legislative problems; (4) to secure information from and to exchange information with other state legislative reference services regarding matters of legislative and governmental interest; (5) to furnish, upon written request, to the Governor and any member of the Legislature, digests of this information; (6) to draft or aid in the drafting of bills, resolutions, etc., and to render legal services for the Governor and to any member of the Legislature when requested; and (7) to make this information available to the various departments, institutions, and agencies of the Territory, and to citizens of the Territory.

Although the Legislative Reference Bureau is primarily a service agency for the Territorial Legislature and the Territorial departments, it is created as a department of the University of Hawaii. This feature of the Bureau was designed to take advantage of the following conditions: (1) Located at the University, the Bureau is able to correlate its library work with, and make use of, the extensive Library of the University. (2) There are on the staff of the University many persons qualified to give expert services and to contribute toward research in special lines of endeavor. These services, in so far as they may benefit the Territorial Legislature and departments, may be more readily correlated through the Legislative Reference Bureau. (3) The existence of a governmental service on the campus of the University affords an opportunity for students, both graduate and undergraduate, to contribute toward the work of government and to make practical application of their academic training in research and governmental affairs.

The staff of the Bureau consists of a Director, who is also Professor

of Public Administration in the Department of Government, research workers, and student employees.

An important part of the Reference Bureau work, especially as it concerns the University, is the training of students in the principles and techniques of governmental research and public administration. Two students have been granted scholarships for study and work with the Reference Bureau, and graduate seminars and graduate courses in research and Public Administration are conducted in connection with this work.

UNIVERSITY AQUARIUM HAS 254,461 VISITORS

THE AQUARIUM, which completed its forty-first year of service to the Territory of Hawaii in 1944, has had one of the most successful and yet most trying years in its history. It admitted nearly 100,000 more persons than in any previous year, granting free admission to more than one-fourth of a million patrons. The failure of the pumping system, with the resulting dependence of the Aquarium on the Fire Department as a stand-by for pumping sea water, the collapse of ten exhibit tanks, the heavy drain on maintenance funds, the inconvenience of construction, and the problem of obtaining fishes for exhibit, have made the year one of the most strenuous experienced.

The general condition of the Aquarium building remains unchanged. It is termite riddled, in need of paint, sagging, and generally worn out. It was necessary to expend approximately three thousand dollars on the exhibit tanks, and nearly fifteen hundred dollars on the plumbing system in order to keep them usable.

The supply of fishes for the exhibits is still one of the most serious problems. Military restrictions, lack

of equipment, shortage of fishermen, and shortage of men to work at the building have combined to rob the Aquarium of a desirable selection of fishes.

A summary of the attendance at the Aquarium during the fiscal year follows:

	1943	
July		20,153
August		12,059
September		13,941
October		18,117
November		17,909
December		15,495
Total		97,674
	1944	
January		12,224
February		20,405
March		21,180
April		41,960*
May		27,736
June		33,282
Total		156,787
Fiscal year July, 1941, to June, 1942		162,421
Fiscal year July, 1942, to June, 1943		152,302
Fiscal year July, 1943, to June, 1944		254,461

UNIVERSITY KEEPS ITS PUBLIC INFORMED

THROUGH THE PRINTED WORD, the Office of Publications takes the University to the public. It continued throughout the 1943-44 fiscal year to assist in meeting Hawaii's emergency need for greater self-sufficiency by giving the Territory all the information it could about the University's experimental and extension work in food production and food conservation. To this end it sought and obtained the hearty, intelligent cooperation of newspaper editors, radio station operators and com-

*On April 9, 1944, the Aquarium had the largest single attendance in its history, admitting 9,625 persons.

mentators, and the publishers of the Territory's one farm journal, *Hawaii Farm and Home*. Of stories about better farming and better home-making originated or initiated by the Office of Publications, 700 were printed; they occupied about 5,200 column inches of space in newspapers and other periodicals. In addition, the Office supplied the press with an uncounted number of stories about the University's general educational activities.

As a publisher itself, using the facilities of commercial printing houses, the Office of Publications worked during the year on several unusual projects. At the suggestion of the administration, it issued a somewhat revised edition of *Home Gardening in Hawaii* in order to further the production of home-grown food in the Territory. The first edition, financed by the Experiment Station, had been so well liked that the University thought the book should be readily available free of charge to everyone in Hawaii who would use it. At the suggestion of the Office of Publications, the authors of *Fruits of Hawaii* are preparing an amplified but nontechnical edition. This Experiment Station book, sold at a nominal price, has been extensively bought by the public, and it has done a great deal to increase the use of fruits that are abundant in Hawaii and more valuable nutritionally than imported fruits. Publication of the new edition should be completed during the 1944-45 fiscal year.

In the field of pure science the Office of Publications published *Organogenesis in Rubus* as University of Hawaii Research Publication Number 21. Publication of this extensively illustrated book, by Charles J. Engard, Associate Professor of Botany, was recommended by the Univer-

sity Publications Committee after the University Research Committee had described it as "revolutionary in the field of morphology and . . . likely to become classic."

The University Publications Committee prepared a bibliography for the period from July 1, 1939, to June 30, 1943, of publications of the University, publications by faculty and staff members, and theses presented for advanced degrees. This booklet brought up to date a record that had been lacking since 1939, when publication of such lists in *The Report of the President* ceased.

In addition to these publications and the usual catalogues, reports, directories, *The Volcano Letter*, and the Experiment Station's and the Extension Service's bulletins and circulars, the Office of Publications published *Handbook for Instructional Staff*. This pamphlet made available to faculty members for the first time a complete statement of the University organization plan adopted in 1943, of administrative procedures as they affect instruction, of the duties and responsibilities of officers

and administrators, and of the University classification plan, salary schedules, and other information of use to all non-civil service employees. The Office participated during the year in the making of plans for publishing a University of Hawaii scholarly journal.

With the cooperation of the Territorial Civil Service Commission, the University progressed during the year toward stabilizing the University's publications and publicity staff, which even before the war had been handicapped by continual resignations of persons who went to better paid positions — positions obtained largely because of experience in the University's service.

Because commercial printers were short of help and printing papers, the University was finding it increasingly difficult as the year closed to get printing done.

FINANCIAL STATEMENT FOR FISCAL YEAR

A summary of University income and disbursements for the fiscal year 1943-44 is given in Table 4.

TABLE 4
FINANCIAL STATEMENT FOR THE FISCAL YEAR 1943-44
Income (Excluding Plant Funds)

Sources	Total	Percentage
Federal funds	\$ 319,155.95	22.48
Territorial appropriations	700,652.84	49.34
University sources		
Student fees	203,467.90	14.33
Gifts and grants	29,237.92	2.06
Sales and services of education departments	121,391.66	8.54
Miscellaneous	46,033.92	3.25
Total educational and general income	(1,419,940.19)	100.00
Auxiliary activities	289,303.92	
Noneducational	6,785.80	
	\$1,716,029.91	

Expenditures (Excluding Plant Improvements)

Activities	Federal	Territorial	University	Total	Per-centage
Instruction and related activities	\$ 72,964.86	\$278,765.05	\$131,033.53	\$ 482,763.44	37.04
Organized research	94,106.60	130,996.86	43,301.65	268,405.11	20.59
Extension	131,319.84	55,243.97	32,953.95	219,517.76	16.84
Library		45,053.07	32,931.46	77,984.53	5.98
Total for instruction and research	(298,391.30)	(510,053.95)	(240,220.59)	(1,048,670.84)	
Administration and general expense	4,483.35	30,632.97	23,528.26	118,644.58	9.10
Operation and maintenance of physical plant		63,362.30	31,762.53	95,124.83	7.30
Public services		35,805.41	5,177.94	40,983.35	3.15
Total current University expenditures	(302,874.65)	(699,359.63)	(300,689.32)	(1,303,423.60)	100.00
Percentage	(23.24)	(53.69)	(53.07)	(100.00)	
Auxiliary enterprises		793.21	269,674.78	270,467.99	
Noneducational expense		2,040.00	2,013.00	4,053.00	
Total current expenditures	\$302,874.65	\$702,692.84	\$572,377.10	\$1,577,944.59	

DEGREES, DIPLOMAS, AND CERTIFICATES CONFERRED FROM AUGUST 1943 TO JUNE 1944

An asterisk before a name indicates that authority to confer the degree was granted by the Board of Regents in February, 1944; a dagger that such authority was granted in August, 1943. The authority for all others was granted in June, 1944.

HONORARY DEGREES

DOCTOR OF LAWS

Charles R. Hemenway

DOCTOR OF SCIENCE

Chester W. Nimitz
Otto H. Swezey

ACADEMIC DEGREES

MASTER OF ARTS

- †Casey Hayes, Public Administration
(B.A., Stanford University, 1913)
- †Henrietta Concklin Krantz, Speech
(B.A., University of Hawaii, 1934)
- Shinichi Watanabe, History
(B.A., University of Hawaii, 1940)
- Dick Yin Wong, Economics
(B.A., University of Hawaii, 1942)

MASTER OF EDUCATION

- Theodore Alvin Faulkner, Educational Administration
(B.Ed., Teachers College of Connecticut, 1938)
- †Tamotsu Horii, Agricultural Education
(B.S., Agriculture, University of Hawaii, 1932)
- Virginia Alice Jones, Health Education
(B.S., Indiana University, 1933)

MASTER OF SCIENCE

Takuma Tanada, Soil Science
(B.S., University of Hawaii, 1942)

BACHELOR OF ARTS DEGREES

- Elmer Ululani Araujo
- *Georgia Thayer Asch
- Monica Allero Aspuria
- †Gladys Shun Loy Au
- †Arthur Awai
- Grace Mae Bacon
- Barbara Louise Bown
- *Kwai Sing Chang
- Leon Leong Mung Chun
(with honors)
- †Polly Yen Lo Chun
- *Lucretia Stoppard Clark
- †Ruby Ryoko Dewa
- *John Arnold Fitzgerald
- T. Herbert Fukumoto
- Ayako Hirae
- †Yukie Hirano
- Ruth Kyoko Ichiki
- Helen Momoe Ijima
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