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Waialua, Oahu T.H.
Dec. 18. 1971.

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Kommission zur Vorbereitung der Wahlen und der Generalversammlung: W. Hoffmann, H. Clauss, J. Poelt, H.-J. Küster und Frau U. Geißler.

Da eingereichte Arbeiten nicht mehr referiert werden, finden Sitzungen nur in Verbindung mit Vortragsveranstaltungen statt. Hierzu wird von Fall zu Fall eingeladen.

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Lehrstuhl für Allgemeine Botanik (K. Esser) und
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Bewerbungen werden erbeten an: Prof. Dr. K. Esser, 463 Bochum, Postfach 2148.

Am

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wissenschaftlichen Angestellten

(BAT III/BAT II)

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Bewerbungen werden erbeten an: Prof. Dr. K. Esser, 463 Bochum, Postfach 2148.

Das Botanische Institut der Universität Düsseldorf sucht für die Stellen eines

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UNIVERSITY OF GUAM
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April 11
~~March~~ 25, 1973

Micronesica, Journal of the University of Guam

Dr. Otto Degener
Crozier Road
Waialua, Oahu, Hawaii 96791

Dear Subscriber:

MICRONESICA, Journal of the University of Guam, is now in the process of up-dating its mailing list. We readily admit that our past issues have been late in reaching you and at times have never reached you at all. However, we are now reorganizing ourselves and will try to provide each of our subscribers two issues a year (June and December) on time.

The cost of printing has skyrocketed especially since the devaluation of the U.S. dollar in Japan where this journal is printed. The subscription price of $3.00 per volume (per year), initiated in 1964, is now ridiculously low and we are losing considerable amounts of money. We are now in the process of obtaining permission from the President and the Board of Regents of the University of Guam to raise the subscription rates as follows - Individuals ($5.00 per volume), Institutions ($8.00 per volume), and Back Issues ($6.00 per volume) to commence this year (1973).

Our records indicate that many of you have been receiving issues of Micronesica but have not paid for these issues. For those subscribers who wish to purchase back issues, we will provide them to you at the present price of $3.00 per volume. This will be for a limited time only.

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Sincerely yours,

Roy T. Tsuda

ROY T. TSUDA
General Editor, Micronesica

Name_____

The Governor of Hawaii and Mrs. Quinn
and
The President of the Tenth Pacific Science Congress
and Mrs. Snyder
request the pleasure of your company
at a reception
in honor of the Delegates
to the Tenth Pacific Science Congress
on Wednesday, the twenty-third of August
from five to seven o'clock
Washington Place
Honolulu, Hawaii

Business Suit

PACIFIC SCIENCE ASSOCIATION

TENTH PACIFIC SCIENCE CONGRESS

To be held at the University of Hawaii, Honolulu, from 21 August to 6 September, 1961, sponsored by the National Academy of Sciences, Washington, D.C. and Bernice P. Bishop Museum, Honolulu, Hawaii, with the cooperation of the University of Hawaii.

March 6, 1961

Dr. Isa Degener
Waialua, Oahu

Dear Dr. Degener:

This will acknowledge receipt of your application for the TENTH PACIFIC SCIENCE CONGRESS.

We are pleased to note that you are making your own arrangements for hotel accommodations. Your reservation for a field trip space has been referred to the appropriate Committee Chairman.

We are looking forward to having you with us for the Congress.

Sincerely yours,

Harold J. Coolidge

Harold J. Coolidge
Secretary-General

22. G. AXILLARIS var. MICROPHYLLA (Fosb.) Deg. & Deg. (Syn. G. Hillebrandii var. typica f. microphylla Fosb. ibid. 60).

Among the 64 categories of Dr. Fosberg's putative hybrids, discussed in 19 pages, may lurk specimens that are true forms and even true varieties without any hybrid admixture; conversely, in some of the above putative varieties recognized by us may lurk some nothomorphs developed by recent or more likely ancient hybridization and backcrossings. Hence the excellent monograph by Dr. Fosberg should not lull the collector into thinking that the study of local Gouldiae has been completed. He should continue to gather and study representatives of this genus, whose 2n chromosome number varies from approximately 72 to 105, in the field and attempt to untangle questions of hybridization experimentally.

- - - - - - - - - - - - - - -

July 6, 1961

Memo to Dr. Otto & Dr. Isa Degener,
Waialua, Oahu, Hawaii

You occupied 2 1/6 pages in PHYTOLOGIA, Volume 7, or about 1/3 percent of the total number of pages in the volume.

You are therefore entitled to 1/3 percent of the $795.37 bank balance at the close of the volume, or $3.99

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Harold N. McCombs

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A NEW DODONAEA FROM MOLOKAI, HAWAII

Otto & Isa Degener

Local officials, not realizing that 99 percent of our native phanerogams are endemic or not impressed by this fact, are now subjecting our public lands to intense "conservation." One of their projects for such areas not suitable for the pursuits of agriculture or animal husbandry is to introduce Continental game animals such as antelope, deer and mouflon; another, to plant them to exotic timber trees such as pines and Samanea saman (Jacq.) Merr. Thus we are efficiently rushing a native flora, that took ten million years to evolve, to extinction; and slowly strangling our lucrative tourist trade. An example of this fast-vanishing flora, discovered while conducting field work under auspices of the National Science Foundation, is the following:

DODONAEA ERIOCARPA var. SHERFFII Deg. & Deg., var. nov.

Arbor 3 m. alta; foliis 40--60 mm. longis et 6--9 mm. latis; capsulis 4-alatis, 17 mm. longis, 12 mm. latis.

Three meter high entirely glabrous somewhat varnished tree with abundant leafy erect twigs. Leaves crowded, narrowly oblanceolate, commonly 40--60 mm. long and 6--9 mm. wide, acuminate to sessile or subsessile base, acuminate to minutely rounded apex, subentire. Capsule inflated, stramineous to crimson, 4-winged, 17 mm. long, 12 mm. wide including the 3 mm. wings.

Type locality: "Makai of Maunahui, Molokai. On open ridge in scrub." This variety is on the verge of extinction due not to introduced herbivores to which it seems unpalatable, but to the planted exotic pines whose fallen needles are helping kill all surrounding vegetation. Type specimen: Degener & Degener no. 24,952, July 30, 1958. This taxon is named for Dr. Earl E. Sherff whose splendid monographic work on the genus Dodonaea in the Hawaiian Islands facilitates the recognition of novelties.

- - - - - - - - - - - - - - -

GOULDIA IN HAWAII

Otto & Isa Degener

In preparing a paper for the Pacific Science Congress to be held in Honolulu this Fall, we had occasion to review literature on the rubiaceous genus Gouldia. We believe we are contributing a somewhat better understanding of the genus as it is found in the Hawaiian Islands by the following nomenclatural changes, mostly altering monographer F. R. Fosberg's various, to us seemingly too conservative, taxa to the next higher rank:

1. GOULDIA OVATA var. HETEROPHYLLA (Fosb.) Deg. & Deg. (Syn. G. terminalis var. ovata f. heterophylla Fosb. in B. P. Bishop Mus. Bull. 147: 52. 1937).

2. G. OVATA var. KALAUPAPA (Fosb.) Deg. & Deg. (Syn. G. terminalis var. ovata f. kalaupapa Fosb. ibid. 51).

3. G. OVATA var. LYDGATEI (Fosb.) Deg. & Deg. (Syn. G. terminalis var. ovata f. Lydgatei Fosb. ibid. 53).

4. G. OVATA var. MAKAWAOENSIS (Fosb.) Deg. & Deg. (Syn. G. terminalis var. ovata f. makawaoensis Fosb. ibid. 50).

5. G. OVATA var. MAUNAHUI (Fosb.) Deg. & Deg. (Syn. G. terminalis var. ovata f. maunahui Fosb. ibid. 51).

6. G. OVATA var. MEMBRANACEA (Fosb.) Deg. & Deg. (Syn. G. terminalis var. ovata f. membranacea Fosb. ibid. 53).

7. G. OVATA var. OAHUENSIS (Fosb.) Deg. & Deg. (Syn. G. terminalis var. ovata f. oahuensis Fosb. in Britt. 8: 176. 1956).

8. G. OVATA var. OBOVATA (Fosb.) Deg. & Deg. (Syn. G. terminalis var. ovata f. obovata Fosb. in Bull. Torr. Bot. Cl. 70: 391. 1943).

9. G. OVATA var. PETIOLATA (Fosb.) Deg. & Deg. (Syn. G. terminalis var. ovata f. petiolata Fosb. in B. P. Bishop Mus. Bull. 147: 53. 1937).

10. G. OVATA var. PUNAULA (Fosb.) Deg. & Deg. (Syn. G. terminalis var. ovata f. punaula Fosb. ibid. 53).

11. G. OVATA f. RUSSII (Fosb.) Deg. & Deg. (Syn. G. terminalis var. kaala f. Russii Fosb. in B. P. Bishop Mus. Bull. 147: 49. 1937; G. terminalis var. ovata f. russii (Fosb.) Fosb. in Britt. 8: 176. 1956).

12. G. OVATA var. SANTALIFOLIA (Fosb.) Deg. & Deg. (Syn. G. terminalis var. ovata f. santalifolia Fosb. in B. P. Bishop Mus. Bull. 147: 51. 1937).

13. G. OVATA var. STOREYI (Fosb.) Deg. & Deg. (Syn. G. terminalis var. ovata f. Storeyi Fosb. ibid. 52).

14. G. OVATA var. SUEHIROAE (Fosb.) Deg. & Deg. (Syn. G. terminalis var. ovata f. Suehiroae Fosb. ibid. 52).

15. G. CORDATA var. ACUMINATA (Fosb.) Deg. & Deg. (Syn. G. terminalis var. cordata f. acuminata Fosb. ibid. 45).

16. G. CORDATA var. MOLOKAIENSIS (Fosb.) Deg. & Deg. (Syn. G. terminalis var. cordata f. molokaiensis Fosb. ibid. 45).

17. G. CORDATA var. NEALAE (Fosb.) Deg. & Deg. (Syn. G. terminalis var. cordata f. Nealae Fosb. ibid. 45).

18. G. AXILLARIS var. HAWAIIENSIS (Fosb.) Deg. & Deg. (Syn. G. Hillebrandii var. hawaiiensis Fosb. ibid. 61).

19. G. AXILLARIS var. NODOSA (Fosb.) Deg. & Deg. (Syn. G. Hillebrandii var. nodosa f. eunodosa Fosb. ibid. 61).

20. G. AXILLARIS var. NODOSA f. LANCIFOLIA (Fosb.) Deg. & Deg. (Syn. G. Hillebrandii var. nodosa f. lancifolia Fosb. ibid. 61).

21. G. AXILLARIS f. GLABRIFOLIA (Fosb.) Deg. & Deg. (Syn. G. Hillebrandii var. typica f. glabrifolia Fosb. ibid. 60).

I beg to acknowledge receipt of the following publications :—

Supplements to "Flora Hawaiiensis"
CONVOLVULACEAE, EUPHORBIACEAE
and previous sheets received May '59

and tender my grateful thanks.

M. Johnson
Librarian

Botanic Garden,
Adelaide, South Australia

for T. R. N. LOTHIAN,
Director

June 12th, 19 59.

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Department of Botany
British Museum (Natural History),
Cromwell Road,
London, S.W.7.

4th May, 19 59.

Please accept my grateful thanks for Publications just received.

J. E. Dandy
Keeper of Botany

Dd248 4/55 JC&S 669

No.

"Flora Hawaiiensis"

Families: 21, 98, 107, 137, 190, 302, 305, 307, 328 & 338.

ROYAL BOTANIC GARDENS,
KEW, SURREY.

15th June, 1959.

I have to acknowledge the receipt this day of the contribution mentioned in the margin, made by you to the Royal Botanic Gardens, for which I tender my thanks.

for Dr. G. Taylor, Director

Wt 21310/604 8/58

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chland

München 38, 11.6. 195 9

Sehr geehrter Herr!

Die Botanische Staatssammlung München bestätigt höflichst den Erhalt der von Ihnen übersandten Sonderdrucke und spricht dafür Ihren verbindlichsten Dank aus.

Mit vorzüglicher Hochachtung!

Flora Hawaiiensis
separates

Prof. Merxmüller
Dr. H. Merxmüller

The Library Commission
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POST CARD

Dr. Mrs. Degener
Waia lua, Oahu
Hawaii, U.S.A.

My dear Dr. Degener,

I acknowledged with my thanks the recipt of a separate reprints your exceedingly interesting paper on "Flora Hawaiiensis" I shall look forward with great pleasure to study your paper more.

The Library of the University of Kansas

has received as a gift from Mr. Otto Degener

Degener, Otto: Naturalist's
South Pacific Expedition: Fiji.

for which grateful acknowledgement is made.

Sincerely,

(Miss) Marie Hipp
Exchange and Gift Librarian.

Lawrence July 28, 1959

THE PRESIDENT AND REGENTS
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University of the State of New York
have received your generous gift to the
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Expedition: Fiji

by

Otto Degener, B.S., M.S.

which they gratefully acknowledge.

STATE LIBRARIAN

Dr. Otto Degener

17 July 1959

INSTITUTE OF PALAEOBOTANY
LUCKNOW (INDIA)

Dear Dr. Degener,

Receipt is thankfully acknowledged of the following

1. Hawaii's Crop Parade.
2. The genus Coprosma.

With best wishes,

Yours sincerely
R. N. Lakhanpal.

Recebemos e agradecemos:
We have received with thanks:
Nous avons reçu et vous en remercions:

DATA: 9. 4. 59

Degener, Otto
Flora Hawaiiensis - 1946
Naturalist's South Pacific Expedition: Fili - 1949

Falta-nos:
We are in want of:
Il nous manque:

HONOLULU MAY 10 1959 HAWAII

WAIALUA MAY 11 1959 HAWAII

BIBLIOTECARIO

Feb. 10, '59

Dear Drs. Degener,

I wish to acknowledge with thanks the receipt of the undermentioned papers,

Flora Hawaiiensis.

Naturalist's South Pacific Expedition: Fiji.

Sincerely,

Prof. T. HOSOKAWA
Laboratory of Plant Ecology
Dept. of Biology, Faculty of Science,
Kyushu University, FUKUOKA,
JAPAN

books often increase their value 10-fold

There are bibliophiles & bibliomaniacs.

C. D.

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TENTH PACIFIC SCIENCE CONGRESS

UNIVERSITY OF HAWAII
HONOLULU, HAWAII, 1961

XIe CONGRÈS INTERNATIONAL de BOTANIQUE

MONTRÉAL, 19-29 AOÛT 1959

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Orizaba 140

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100

Taxco [illegible] = 67.50

Merida [illegible] 150

chicken 330

tax 10

[illegible] = 50.—

total = 84.60

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Guatemala, 22 de Sep. de 195 9.

Señor Dr Otto Degener

Hawaii

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obituaries

Hunt

Louis A. Henke, 38 years at UH

Hon. Adv. 5/8/85 taught animal husbandry in U. of H. S. where I was there in school years 1922-23 & 1925-27. Rather taciturn personality; good teacher. O.D.

Louis Albert Henke, emeritus professor in the University of Hawaii's College of Tropical Agriculture, died Monday, one week short of his 96th birthday.

Born in Wisconsin on May 13, 1889, Professor Henke was graduated from the University of Wisconsin. He came to the Islands in 1916 and joined the faculty of what was then known as the College of Hawaii. The Manoa campus at the time consisted of Hawaii Hall and an assortment of wooden sheds.

When he arrived, a third of the student body majored in agriculture. Professor Henke taught six of the 11 courses offered in the major.

He conducted pioneer research into the uses of sugar cane molasses and pineapple bran for livestock feed and was the author of 70 bulletins and scientific papers. He also held exchange professorships at the universities of Wisconsin and Puerto Rico.

He served as the assistant and then associate director of the Hawaii Agriculture Experiment Station from 1937 until his retirement in 1954. In all, he spent 38 years at the University of Hawaii.

Following his retirement, Henke Hall, housing the College of Tropical Agriculture's Department of Animal Science, was named in his honor.

A memorial service is set for 5 p.m. Friday at the First United Methodist Church. No flowers. Donations may be made to the church or the University of Hawaii. Arrangements by Borthwick Mortuary.

He is survived by his wife, Rachel D., and a daughter, Jean Henke.

rec. 10 June 1985 Degree #32

Baron Goto, student at University of Hawaii when I was on faculty there in 1925-27, showed outstanding social intelligence. - Hon. Star-Bull. 5/9/85

UH to honor 4 on centennial

Four prominent Hawaii citizens of Japanese ancestry will receive honorary doctor of humanities degrees at the University of Hawaii's 74th annual commencement excercises at the Manoa campus May 19.

The honorary degrees are being conferred as Hawaii commemorates the centennial anniversary of the arrival of the first Japanese immigrants. The University of Hawaii Board of Regents noted that the four are descendants of *kanyaku imin*, or contract immigrants.

Fujiyama

Fukunaga

Goto

Marumoto

They are:

● **Wallace S. Fujiyama**, a Honolulu attorney and former member of the university Board of Regents. He is a member of the board of the UH Foundation and sits on the board of directors for Aloha Airlines and First Hawaiian Bank. He is also the chairman of the Advisory Board of Duty Free Shoppers Ltd.

● **George J. Fukunaga**, chairman and chief executive officer of Servco Inc. He is a member of the board of the UH Foundation, the East-West Center Foundation and the Iolani School Board.

● **Y. Baron Goto**, former director of the Hawaii Agricultural Extension Service and a senior professor of agriculture at the UH. He was vice chancellor of the East-West Center in the 1960s and was instrumental in arranging the gift of the Japanese garden to the East-West Center. In 1964 he was named one of three U.S. representatives to the South Pacific Commission by former President Lyndon Johnson. He has served on the board of directors of 19 non-business and corporate organizations.

● **Judge Masaji Marumoto**, who was a lawyer in Honolulu from 1946 to 1956 before being appointed to the Hawaii Territorial Supreme Court. He is the former president of the Kuakini Hospital and Home and was a member of the board of directors of Queen's Hospital, Ewa Plantation Co., Bank of Hawaii, the Hawaii Newspaper Agency and the Japan-American Society.

Commencement exercises will be held in the university's Old Quadrangle in front of Hawaii Hall beginning at 4 p.m. The public is invited.

A.C. Smith's Fl. Vitiensis, Vol. 2. Pittsb.

1937. *Arnold Wall* obtained a comparatively few herbarium specimens in Fiji; these are deposited at AK, but those I have seen lack field numbers and locality data.

1940–1941. During the 1930's Mrs. *Anne Archbold*, of Washington, D.C., in pursuance of her interest in tropical exploration, commissioned the building in Hong Kong of the yacht *Cheng Ho*, patterned after a fifteenth century Chinese junk. In the *Cheng Ho* Mrs. Archbold made two extended exploratory trips, the first in the Philippines-Moluccas area with David Fairchild as botanist, and the second in more easterly Pacific archipelagoes. On the second trip *Otto Degener* was invited to serve as botanist. Joining the *Cheng Ho* at Suva in November, 1940, Degener (1943, 1949) made extensive plant collections in Fiji until June, 1941. Among his assistants, *Emilio Ordonez; Aloisio Tabualewa*, and *Timoci Bebe* should especially be named as participating in botanical efforts. Degener's collections come in part from Thakaundrove Province, Vanua Levu, where he worked in the vicinity of Savusavu Bay as far west as the Yanawai River. On Viti Levu he was active in several areas, the most significant material perhaps coming from the vicinity of Nandarivatu and southward to Nandrau in Nandronga & Navosa Province, from Ra Province near Viti Levu Bay, and from the Serua hills of the south coast. A few collections were also made on some of the Loma-i-Viti islands. Degener's numbers during this period extend from *13500* to *15642*, approximately the last hundred of which were obtained after his departure by *Tabualewa*. The first set is deposited at A and other appropriate Harvard herbaria, an essentially complete second set at NY, and other sets at BISH, K, MO, S, UC, US, and many other depositories. The botanical collections of the second *Cheng Ho* expedition greatly extended our knowledge of the indigenous plants of Fiji (Smith, 1942).

1941–1947. *Lorna Reay* (later Mrs. Lorna Paley), a Fiji Government employee stationed for a time at Nandarivatu, Viti Levu, made a few collections from that interesting locality, these being deposited at A. The indicated dates may not be sufficiently inclusive.

1941–1977. *Noël Louis Hilmer Krauss*, an entomologist based in Hawaii, visited Fiji on different occasions during his studies of biological control of insect pests. He collected a number of herbarium specimens, mostly on Viti Levu and Vanua Levu; these are deposited at BISH.

1945. *V. J. Livingston* obtained a comparatively few herbarium specimens on Viti Levu; the material is unnumbered and is deposited at US.

1946–1947. *J. H. Vaughan* made a series of comparatively few but excellent plant collections in Fiji during a visit extending at least between November and February. He visited several areas of Viti Levu, including southern and western coastal localities and the vicinity of Nandarivatu. His Fijian field numbers extend approximately from *3200* to *3500*; the first set is at BM but a nearly complete set is at K, and a limited number of duplicates have been seen at US.

1947–1948. *A. C. Smith.* On my second opportunity to further botanical studies in Fiji, I arrived in Suva on April 5, 1947, and left on January 12, 1948. As my itinerary has been briefly detailed (Smith, 1950: 138–141), only a few points will be here elaborated. Collection numbers used on this occasion were *4001–6912*, and my principal objectives were some of the botanically lesser known parts of Viti Levu (nos. *4001–6329*) and Vanua Levu (nos. *6330–6912*). A considerable period was spent in

— [illegible] Degener published "Naturalist's South Pacific Expedition; Fiji, 1–303, 1949."

To be published
after death

AUG. 29 1977

Harold St. John
Sept. 1935
Berlin, Germany

been in pasture.

The inventory proposes that parts of the valley should go back to agriculture, much like the old days. Bananas, macadamia nuts, breadfruit, avocadoes, anthuriums, dryland taro, yams, and watercress are some of the crops proposed.

There may be problems with some of the crops, the inventory says, but some of them may be feasible.

Beatrice K. Krauss, in a study of the ethnobotanical resources, surveyed the lower valley, noted terraces for dry and wet taro, and quoted reports of breadfruit and sweet potato cultivation in the old days.

The study report recommends that herbicides or insecticides which are not biodegradable should not be used, that crops which could escape and naturalize in the upper valley should not be grown, and that sewage and garbage disposal for residences should be controlled.

It suggests that woodlands above 1,500 feet may be part of a buffer zone to prevent the spread of exotics up the valley.

TO PROTECT the natural resources of the valley above 2,000 feet, it recommends control of cattle, mongoose, feral pigs, strawberry guava and Java plum.

The study lists five species in the valley as very rare: an endemic gobiid fish that has been proposed for listing as an endangered species; Newell's shearwater, an endangered bird; a rare and endemic damselfly that had not been collected in more than 25 years; and a very rare snail, Perdicella carinella.

In working out a plan for Kipahulu, the Conservancy has been talking with a group known as Pohaku, men with Hawaiian blood who are interested in farming, especially with old Hawaiian crops. Most are young, but a few older ones are serving as teachers.

They have already restored several old lo'i (terraces) and have planted them to dry-culture taro and sweet potatoes.

Taketa said that Sam Kalalau III, the Pohaku president, is helping with the planning effort.

Krauss Degener

Clidemia

THE ALLEGATION that Harold L. Lyon, the late veteran sugar botanist, introduced the plant pest Clidemia Hirta to Hawaii is false, according to Constance E. Hartt, who edited a recent book about Lyon.

The allegation was made by the veteran Island botanist Otto Degener.

Hartt says she has been informed by the Lyon Arboretum that it has no evidence that Lyon brought in the plant and that Clidemia is not included in Lyon's list of introductions.

She quotes a 1953 bulletin of the Board of Commissioners of Agriculture and Forestry that says:

"This shrub was found in November 1952 infesting approximately one square mile of land in the Wahiawa watershed. This was the first record of the plant in Hawaii. It is not known how the plant was introduced here. It has not been reported elsewhere in the territory.

"Clidemia is a native of tropical America."

In the years since 1952 Clidemia, also known as Koster's curse, has spread widely over Oahu's mountains, has gained a foothold on other islands, and has caused searches, not very successful as yet, for biological agents to control it.

Degener

DEGENER, INCIDENTALLY, has received a copy of a story that appeared in the *San Francisco Chronicle* of May 21 that told how a Fijian tree named for him has been collected for cancer research.

The collection was made by a San Franciscan, Michael Weiner, who spends part of each year collecting exotic plants used as folk medicine and sending them to the U.S. Department of Agriculture and the National Cancer Institute.

One of the trees in Weiner's most recent shipment is known by the Fijians as king's bark and has the scientific name of Degeneria vitiensis.

Degener, on a scientific expedition in 1942, collected it and found later that it represented a species never before recorded and that it failed to fit into any known plant family.

Later in 1942 the tree was given its scientific name and placed in the newly established family Degeneriaceae. Degener is one of only two living men to have a family of flowering plants named for him.

Degener hopes the scientists will find the plant has medicinal values. The plant, endemic to Fiji, has been grown in Lyon Arboretum from Fijian seed, he says.

The tree has been called a "living fossil" by Peter Raven, director of the Missouri Botanical Garden.

Honolulu Star-Bull.

When botanizing about Savu Savu Bay, Vanua Levu, Fiji in '41, I became acquainted with Koster's Curse & its successful competition against endemics. Years later, about to botanize along the trail from Pupukea to Kahuku, I met my friend & conscientious Haw. Sugar Planters' Experiment Station member with truck and workmen on the Pupukea side of trail setting out from tins healthy seedlings of Clidemia. These had been raised in the Wahiawa H.S.P.A. nursery in Wahiawa. I rememstrated with Dr. Harold Lyon against his action, but without success. The plants, with the aid of mynah & other fruit eating birds, should help thicken the plant cover of Oahu to increase water supply for cane irrigation. Dr. Lyon also mentioned the advantage of planting banyans through out Oahu's forests as these Ficus species would produce a thick, tangled cover which, unlike exotic trees with good wood, would never be harvested for lumber andcthus reduce the water supply for years. O.D.

Hon. Star-Bull. ? 7/17/81 ± ?

Bca. 16 July 1984

UH prof honored for fruit fly work

Dr. & Mrs H.L. Carson are friends of Degeners. Hon. Star-Bull. & Adv.

10/17/84

Hampton L. Carson, professor of genetics at the University of Hawaii's John A. Burns School of Medicine, has been selected to receive the 1985 Leidy Medal of the Academy of Natural Sciences.

Carson

Carson was chosen to receive the medal for "original contribution to the fields of evolutionary biology and genetics, and specifically for . . . work on evolutionary patterns among Hawaiian Drosophilia." The Academy described Carson's research with these Hawaiian fruit flies as among "the most important studies of 20th century biology."

Carson is one of only two UH faculty members elected to the National Academy of Sciences for work done while on the

the advertiser **salutes**

faculty. The other is **Douglas Oliver,** professor emeritus of anthropology.

Advisers honored

Hui Aikane, a Univer- Hawaii-Manoa student group, has been select- of seven nationwide a 1984 Outstanding Advising Progran-

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elevation sunshine and help preserve moisture, Degener wrote.

Within the leaves, most plants have air pockets between cells, but the silversword and certain California tarweeds have a kind of gel, wrote Sherwin Carlquist in "Hawaii, A Natural History."

HAROLD L. LYON, a tall man, cast a long shadow that has resulted in publication of a book that tells about his connection with Hawaii's forests, water supply, plant introductions, botanical gardens, and sugar industry.

The book, "Harold Lloyd Lyon, Hawaiian Sugar Botanist," has been published by the arboretum in upper Manoa Valley that bears his name. It was edited by Constance E. Hartt, for many years a plant physiologist with the Hawaiian Sugar Planters Association Experiment Station after being invited by Lyon to join the station.

The book is part biographical, part reminiscences of Lyon by Island scientists who knew him, and part extracts from his writings.

Lyon was invited here by the HSPA in 1907, five years after receiving his doctorate from the University of Minnesota.

Until his death in 1957 he had a busy career that included work as a plant pathologist with the experiment station, head of the station's Department of Botany and Forestry, work with pineapples, world-wide travels, station director, first director of Foster Botanic Garden, establishing the Wahiawa Botanic Garden and the Manoa Arboretum, and being in charge of emergency food production in Hawaii during World War II.

A book about a leading Hawaii botanist.

SOME OF HIS most important work dealt with forests and water supply, work that in recent years has been criticized in some circles.

Early in his Island career, Lyon decided that water conservation was the dominant function of forests here. Several weeks after arriving here he sailed to Maui to discuss with H.P. Baldwin the problem of dying native forests.

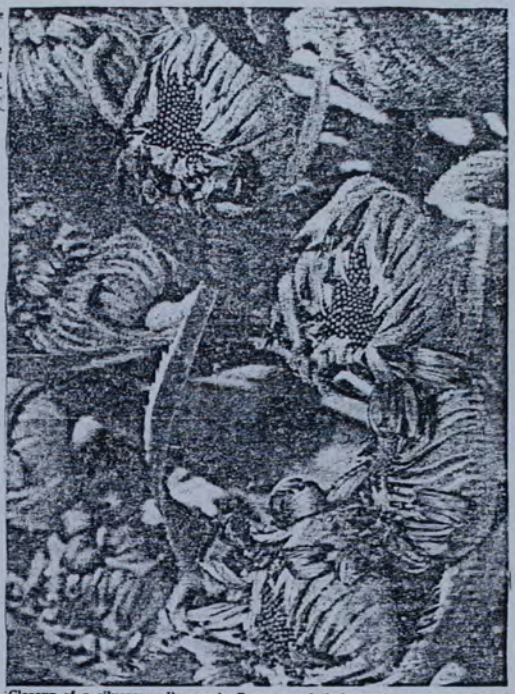
The sugar planters for whom he worked knew their industry depended on adequate supplies of fresh water which, in turn, depended on vegetation on the watersheds.

"Healthy forest growth would hold the rainfall long enough for it to seep into the natural underground reservoirs, while the depleted forests allowed the rain to run off to the sea," the book says.

Lyon decided that native trees could not withstand being trampled and injured by the cattle, pigs and goats brought here nor could they compete with new grasses and ferns brought here.

Lyon was placed as head of the HSPA's Department of Botany and Forestry to assist the Territorial Board of Agriculture and Forestry in finding new trees for reforestation and watershed protection.

The book contains many references to the decline of native forests.



Closeup of a silversword's purple flowers and their seeds. Related to the sunflower, the silversword for the first nine to 14 years of its life looks like a 2-foot spiny sphere (top photo).

The gel soaks up large amounts of water and stores it. This protects the plant from long dry spells and provides the moisture it needs for its huge flowering stalk.

Carlquist also suggests the shape of the plant, with the growing tip hidden down among longer spikes, protects it from the cold.

The silversword grows from a few limp leaves to a firm form with spikes 8 to 16 inches long creating a ball some two feet wide.

After 9 to 14 years, according to Marie C. Neal's "In Gardens of Hawaii," the leafy flowering stalk rises from the center of the plant as much as six feet.

At first it is silvery and encased in leaves like the main plant, but then the leaves open up and as many as a hundred or more purplish flowers burst forth, resinous and emitting a heavy, sweet aroma.

Flowering can occur from summer through early fall, and when seeds have formed, the flowering stalk dries and eventually the plant dies without flowering again.

During the past two years, however, not many of the plants have flowered, according to Loope. And he's not sure why. In normal years as many as 2,000 or more flower during the summer. This year, Loope said, only a few hundred, at best, have flowered.

The silversword has a number of close relatives in Hawaii, all of them occurring nowhere else in the world. Included are the greenswords, a couple of other silverswords, and the iliau of Kauai.

Degener believes they all have evolved from a single plant that must have arrived in Hawaii when the islands were young. They're members of the daisy family, and closer relatives include the sunflower, wedelia and the Spanish needle or beggar's tick.

While there are differences in size and color, the individual blossoms of each of the relatives are recognizably similar.

to Lyon's belief that native species such as koa and ohia could not be depended on, and that more vigorous replacements should be sought.

HE WAS ESPECIALLY interested in species of the Ficus or banyan because they would have no value as timber and so would not be vulnerable to logging. While individual Ficus trees are found today, they did not become forests.

"This blasphemous project fortunately failed," the botanist Otto Degener said in his reminiscences about Lyon. Most of the reminiscences about Lyon were highly complimentary, but Degener's were less complimentary.

"Though I always liked and respected him, I as a botanist considered him increasingly a danger to the science of botany in the Hawaiian Islands. He never fully sensed the sacredness of our endemic plants and their dependent animals that had taken nature millions of years to evolve."

Degener said, however, that Lyon was outstanding in the art of horticulture.

Harold L. Lyon

Degener has in recent years blamed Lyon for the introduction here of Clidemia hirta, an exotic plant that today is spreading and causing much damage to native forests.

The damage caused by Clidemia is rather ironic in that Lyon wrote about how "two pestiferous plants," Hilo grass and staghorn fern, were pushing back native vegetation in the Koolau Mountains.

THE BOOK contains many references to Lyon's concern for native forests, even though his introduction of foreign plants had consequences he did not expect.

In a 1923 letter, he expressed concern about overdrawing of the artesian supply and said, "Instead of spending our money to take more water out from the underground sources, we should spend this money to get more water into these sources: in other words, cover our watersheds with a healthy, water-conserving forest."

He advocated planting a continuous barrier forest below the remaining native forest, believing this would protect the forest reserve. He favored planting windbreaks across open stretches and across crests of gulches.

In spite of his enthusiastic introduction of plants from tropical and sub-tropical places around the world, he was also interested in native plants.

"There are many unique and very interesting native plants still to be found in these islands which ought to be saved from extinction," he wrote.

Lyon during the 1920s received reports from foresters on the different islands, the reports of 1925 describing the foresters' problems with the makers of okolehao, the liquor made from ti roots. In maintaining their stills, the bootleggers did considerable damage to the forests.

THE BOOK contains a photo taken in 1944 of Lyon with two other hunters with feral sheep they had killed on Mauna Kea. The era was a more formal one than today; all three hunters wore neckties and Lyon wore a jacket.

L.W. Bryan, the veteran Big Island forester who took the picture, said that Lyon had introduced seeds of 9,738 plants into Hawaii and also collected seeds of 1,100 local plants.

Bryan also recalled a trip he took in 1932 with Lyon to Kahoolawe and how they were routed out of the one house available by the arrival of Gov. Lawrence Judd in a Navy boat. They had to sleep on the beach.

Bryan said that at that time he was shipping trees to Kahoolawe for reforestation, an effort that the state forestry division continues today.

The Lyon Arboretum has also published a pamphlet, selling for $2, "Creating a Hawaiian Ethnobotanical Garden," by Beatrice H. Krauss, a botanist who remains very active in retirement. The Lyon book, with 110 pages, sells for $4.95.

Both publications may be purchased at bookshops in Honolulu or at the arboretum.

Moanalua

THE MOANALUA Gardens Foundation is expanding its education program by scheduling guided weekend walks in Moanalua Valley for groups other than classes.

It has walks scheduled on two Saturdays, July 11 and Aug. 1, and on four Sundays, July 26 and Aug. 9, 16, and 30. All walks begin at 9 a.m. and last from four to six hours and are open to individuals, families or groups.

Registrations are required, however. Persons should call 839-5334 and leave name, phone number, and number in group. The walks are "filled" when 50 have signed up.

They are free, but donations are welcome for support of the education programs.

A FIVE-YEAR PLAN for lands in isolated Kipahulu Valley, Maui, owned by the Nature Conservancy, should be completed in another month, according to Kelvin H. Taketa, the Conservancy's field representative.

The plan is being worked out with the help of the Kipahulu Project Advisory Committee, formed in April and including members of the Hana and Kipahulu communities.

The upper part of Kipahulu, an essentially pristine rain forest, was given in 1969 to Haleakala National Park by the Conservancy and the State of Hawaii, both of which owned about one-half of the upper valley lands.

The lower valley, from the 2,000-foot elevation to the ocean, is owned by several groups, including the National Park Service, the state, the Conservancy and various individuals.

The lower valley has been the subject of disputes over an attempt to transfer title of additional land to the national park and over land titles. Since withdrawal of a condemnation suit in May 1980, efforts have been under way to work out a plan in cooperation with the local community.

A plan for Kipahulu Valley on Maui is nearing completion.

A "Resources Base Inventory of Kipahulu Valley Below 2,000 Feet," which proposes some restoration of Hawaiian agriculture, is being used as a guideline for the plan that is being formulated, Taketa said.

THE INVENTORY was sponsored by the Conservancy and written by several persons for the Cooperative National Park Resources Studies Unit, with the unit's director, Clifford W. Smith, as editor.

Lower Kipahulu Valley was cultivated with Hawaiian food crops in the old days, was in a sugar plantation from 1880 to 1923, was the scene of an unsuccessful attempt to grow pineapples, and in recent years has

"Volcano Views"

by Virginia Dicks

Contributions to this column can be made by calling Virginia at 967-7221 or by writing to P.O. Box 116, Volcano, Hi., 96785.

VOLCANO—Exciting news. We are on the map! The Reader's Digest World Atlas has arrived and there it is, the only "Volcano" listed in the index. (Our last atlas listed only one—Volcano, Colo., but it seems to have disappeared). On page 49, which Hawaii shares with California, printed on the map is VOLCANO, just as big as all the other places on the Big Island with the exception of Hilo which rated larger print. That is a real step ahead in history, or is it geography?

Now that we are recognized in the big bad world, maybe we may rate being on some of the maps that are available locally, such as the ones given to visitors.

Just thought you would like to know we are on a map. It made my day.

Two individuals who are responsible for putting, not only Volcano, but all of Hawaii on the map as far as obtaining world wide recognition in the botanical world are the Drs. Isa and Otto Degener. They have just returned from Germany where the bestowal of the Willdenow Medal showed the high approval of the Degeners' study of Hawaii's plants, their classification and preservation in museums (of things botanical) throughout the world.

It was quite a nostalgic trip for the couple, their first visit to the renowned Berlin Botanical Garden and Museum since 1953; a real homecoming for Isa who was Isa Hansen when she worked for this venerable establishment.

Then as a young Ph.D. she was one of only two women on the staff, and she also taught in the university, of which the Botanical Garden and Museum was then a part. She had an enjoyable time as she conversed with former students who are now staff members and also visited with former co-workers.

In 1952, Dr. Otto Degener was also there working on special projects in the herbarium where they have collections of dried plants, classified and mounted for botanical study. It was at this time, he says, that he found "his rare orchid" (Isa) and brought her back as his bride.

Many special events were part of the big jubilee celebration of the 300th anniversary of the founding of the Berlin Botanical Garden and Museum. One they were both impressed with was the reception hosted by the Berlin Senate which was held in a 200 year-old castle where the light was all "candlelight." Huge chandeliers hung from high ceilings with myriads of burning candles, also many candelabrum were along the sides of the rooms. Plenty of light, they said, but with no breezes and because of the candles it did get a bit "stuffy" by the end of the evening.

After all the "jubilee-ing" in Berlin the Degeners visited Isa's mother in the Black Forest area of Germany before returning home to Volcano.

Now at home and still ever mindful of Hawaii's great heritage of plants that are known only in the islands, some so rare they are found only in certain areas such as Volcano and other parts of Puna, they are gravely concerned as to what is now happening to our island as the big,horrible thorny bush with the yellow berries (bigger and more thorny than blackberries) slowly but surely covers over and crowds out all other vegetation in its pathway.

They are alerting a whole list of people who should be interested in eradicating it before it devastates very large areas. Specimens of the weed are being pressed and dried between layers of newspapers (as they prepare all their specimens) then they will be labeled and sent out with the pertinent information. This is the same procedure they follow when they collect and send samples to botanical gardens all over the world.

Orchids subject of museum exhibition

Haw. Trib. - Herald

Orchids will be the subject of a special exhibition, "Orchids: An Historical Survey with Illustrations, Books and Plants," at the Lyman Museum beginning April 2, and continuing to June 9. The exhibition will be on view in the Special Exhibition Gallery of the musuem. 3/25/84

"No one can be in Hilo long and not be aware of orchids," stated Leon Bruno, director of the museum, "and is seemed logical to us to have a special kind of show of orchids for the people of the Orchid Island."

The unique show will be made up of three parts. The first part, on the walls of the gallery, will be illustrations of ordhids. The second, in special glass cases, will feature a collection of books on orchids. The books, mostly very rare 18th and 19th century publications, illustrate orchids as they were discovered by botanists and horticulturists of Europe.

The third part of the show will be a display of blooming orchids presented by orchid enthusiasts and growers in the Hilo area. Allan Sakai, president of the Hilo Orchid Society, is coordinating the live plant exhibit. This part of the exhibition will change constantly, as different plants bloom through the spring and early summer.

"In keeping with the intent of the museum," said Bruno, "Father Thomas Kunichika, who curated the show, has put together an historic survey about orchids with some of the earliest pictures, and books to the very latest hybrids developed by Hilo growers."

"This has been an interesting kind of show to curate," said Kunichika, referring to the three parts of the show. He noted that because of the orchids, there might be appeal and interest in the exhibit among three divergent groups: artists, rare book lovers and collectors, and hor-

See EXHIBITION
Page 25

RARE BOOK — Leon Bruno, museum director, and Allen Sakaiesident of Hilo Orchid Society, examine the largest illustrated book ever lished on orchids.

COVER STORY

Donald Duckworth

An Easygoing Guy With A Funny Name

The positive, new curator at Bishop Museum sets out to duplicate goals he attained at the Smithsonian Institute

By CEIL SINNEX

Schoolteacher Vesta Walker Duckworth had a vision, back in the 1940s, for her older son Donald. Though she herself had contentedly spent her entire life in Athens, Tennessee, she saw Donald "go away" to boarding school. She saw him enter "a profession," rather than his father's lumber business.

Strictly on his behalf, she looked beyond Athens, Tennessee. And so it was that when Dr. W. Donald Duckworth moved 40 years later from Virginia "to the end of the earth" — Honolulu — Vesta Walker Duckworth shook her head and bought her plane ticket.

Both she and Donald Duckworth's younger brother Bill, an Indianapolis physician, are expected to visit the new Bishop Museum director and his family here this month.

"I can't begin to describe how important my mother has been to me," says the boyish entomologist-turned-director. "This woman has pushed and managed to get two sons through to fairly productive adulthoods, strictly on her own.

"She has been a constant source of encouragement for as long as I can remember."

Vesta Duckworth was a radical in the eyes of her family when she insisted that 15-year-old son Donald be sent to a South Carolina military school for a better education than she thought possible in the local public schools.

As the oldest son and the first grandson of his father's father, Donald Duckworth was expected to inherit and carry on the family lumber business.

"Mother's scheme was to get me away from the pressure of the family business," says Duckworth.

His grandfather died shortly after Donald Duckworth went away to school. Only a year later, his father died.

Duckworth described the days of his father's death as "total disarray." Not the least of the family's problems were financial. Still, his mother did not bring him home to assume the head-of-family role.

He completed high school in South Carolina, where he was exposed to "a diversity of people." During summers at home in Tennessee, the family's doctor filled in as foster father and encouraged both Duckworth boys to study medicine.

As a sophomore at the University of Tennessee, Donald Duckworth made two important decisions.

First, part-time hospital work convinced him he did not want to be a physician. Second, he wanted to marry the girl he met at a dance and with whom he became "best friends."

Sandra Lee Smith left the university to go home to Nashville to work. A lovestruck Duckworth wanted to be near her, and so he transferred to Middle Tennessee State University. The two were married before he graduated.

It came Sandra Duckworth's turn to "go away" with her husband, first to North Carolina State University where he earned master's and

Duckworth at work

PhD degrees in entomology — the study of insects. Later she accompanied him to Washington, D.C., for what would be 24 years with the Smithsonian Institution and became his trusted assistant during field studies all over the world.

Neither could guess that Sandra Duckworth would one day become one of the top politicians in the state of Virginia. But her importance in her husband's life has always been clear.

Asked if he has mentors, Duckworth immediately replies, "My mother and my wife." There are others as well, but Duckworth says the two women have constituted his primary support system.

Another woman had a profound influence. This was aunt Lorene Duckworth, who insisted he be named Donald. Not only that, she saw to it that he was called Donald — even though it was his middle name.

"She had a somewhat twisted sense of humor," relates Duckworth, with obvious delight. Yes, with a name like Donald Duckworth, he was forced to fight for his dignity. By the time he realized he could have switched to Walter, he had won all the battles.

Besides, he likes Walt Disney's quacking cartoon character. It takes a lot more than a name with comical overtones to ruffle Duckworth. It takes more than determined females, too.

"I've never felt threatened by strong women," he says. "I like the idea.

"The unwritten story of the South is, it's a matriarchy. The women in Appalachia have always maintained the long-term strength of the family."

The family doctor steered him toward science, and one of his graduate school professors helped him as he narrowed his field of interest from biology to entomology.

Then there is J.F. Gates Clarke, officially retired but still working at the Smithsonian as a senior entomologist. Duckworth thinks Clarke will be astounded to see himself credited as a mentor.

The museum director throws his head back in laughter as he describes the father-son relationship, with its attendant quarrels, that has evolved over the years.

"He was very upset when I came to Hawaii," recalls Duckworth. "Still, I'd rather go out and have a beer with Jack Clarke than almost anyone."

One of his prized possessions is a book, a gift from Clarke, inscribed, "From one nasty guy to another."

It is difficult to imagine the attentive, smiling Duckworth posing as a "nasty guy."

"I've always found him to be easygoing and positive," says his wife of 29 years. "He's more easygoing than I am, but I think we're both pretty positive."

While he gave up the security of 24 years at the Smithsonian, Sandra Duckworth gave up the very real possibility she might someday become governor of Virginia.

An elected member of the powerful Fairfax County Board of Supervisors, she was also elected to represent Virginia on the Democratic National Committee. The Democratic National Committee voted her on to its executive committee to represent the 13 southern states.

"I had anticipated trying a run for lieutenant governor," she says.

Donald Duckworth proudly shows off newspaper clippings with headlines that confirm his wife's importance in the politics of an ultra conservative state still overwhelmingly dominated by men.

In the dawn of her political career 13 years ago, he admits, it was tough to fight his urge to protect his wife when she was verbally attacked during debates.

He also found it took a while to adjust to the loss of privacy that goes with elected office.

"I never minded being known as Sandra Duckworth's husband," he says. "It's a matter of pride to me."

Why did Sandra Duckworth give it all up?

"For the love of family. We've always worked with each other.

"This is such a beautiful opportunity for him, and for the family. Had the situation been reversed, I think Donald would have done the same thing."

Sandra and Donald Duckworth

The three Duckworth children were very much involved in the decision, which was made gradually during sessions around the kitchen table over the five months of negotiations with the Bishop Museum.

Clifford, 17, is a senior at Punahou School. Laura, 15, and Brent, 13, are Iolani School students. Until two months ago, they had lived for as long as they could remember in the same house in Virginia.

The Duckworths seem almost overwhelmed by their friendly reception in Hawaii.

"I can easily say there's not a moment I've missed Washington," muses the museum director. "That's amazing, because I was very happily involved there.

"I'm not sure why this is, but I'm very grateful."

He guesses that his upbringing in an isolated region where family ties are all-important has helped him to approach this new community with sensitivity.

She has been busy transferring the household from the home which they still own in Virginia to the house they are renting in Waialae-Iki. The full impact of the change from 100-hour work weeks to anticipated leisure time has yet to be felt.

"I'm used to saying, 'Aha! This is what I want.' And then going and doing it."

Sandra Duckworth says she has no specific plans to enter Hawaii politics. She would like to take an active role at the museum, offering her expertise in fund-raising, public relations and involving the business community.

Donald Duckworth wants the Bishop Museum to be more "people-oriented." As a curator and administrator, he helped to guide the Smithsonian toward the same goal in a drive that began 20 years ago.

"I feel I've almost stepped into a time warp," he observes.

Duckworth got into museum work because it provided a way to conduct research in his specialty area, small tropical moths called microlepidoptera. He got hooked on museums because of what he calls "an almost compulsive interest in organizations."

He believes he can make a greater contribution at the Bishop Museum than he could have at the Smithsonian.

Off duty, home and household activities take most of Duckworth's time. He expects to become involved in activities related to his children's schools and community services here, as he did in Virginia.

"I read almost everything you can imagine," he says. "Especially mysteries."

He tells his children that the most important thing in life is to be happy. This, he says, usually comes about through doing the things one enjoys. The Duckworths do not push their children toward specific activities or goals.

"I try to prepare them for what is not necessarily a fair world," he explains. "It's tough out there.

"Life is overcoming disappointments."

Duckworth, however, does not mention personal disappointments since the chaotic time of his father's death. Perhaps that early devastating loss has lessened the impact of subsequent blows.

Duckworth has been participating in the interview in his tidy office decorated with historic museum koa furniture, for hours. Perhaps, it is suggested, he is getting "talked out."

"Me?" He laughs. "No one's ever talked me out yet."

One word has occurred repeatedly throughout the conversation: Sandra.

Still his best friend.

Far away in Tennessee, Duckworth's first unconditional supporter still lives in the house in which her children were born. Vesta Duckworth does not, perhaps, fully understand why her first son chose entomology over medicine, what he does as an entomologist, or why he moved "to the end of the earth."

But she would be the first to defend every one of her son's decisions. Donald Duckworth is sure of that.

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Donald and Sandra Duckworth

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Confronting Unwanted Plants

By Jan Everly Williams
Star-Bulletin Garden Contributor

The advice in this column usually is aimed at keeping things green and growing. In the real world, home gardeners spend a lot of time trying to get some things to stop growing—forever. Things like trees that have gotten too large for a small yard, or strange shrubs, or volunteer vines can drive a person up the garden wall.

Many people are uncomfortable about using chemicals in their yards, but they don't have time or energy for the vigorous, persistent chopping and digging required to get rid of stubborn tree stumps. It is discouraging to realize that most species of brush can resprout from a stump, and many can rejuvenate themselves from just a stem or root fragment.

According to Philip Motooka, weed specialist for the College of Tropical Agriculture and Human Resources, University of Hawaii, chemical control of woody plants is much easier. You can find a number of effective general-use herbicides in your local garden shop. There are two major types, selective and non-selective.

Selective herbicides are effective against broad-leaved plants (dicots) but will not injure most mature grasses. Centipede grass and St. Augustine grass are the exceptions. They are sensitive to selective herbicides. Some of these herbicides are water soluble and require the addition of a surfactant to keep them from washing away with the first rainfall. The surfactant also helps the herbicide penetrate the leaves. Other selective herbicides are oil-soluble esters, which penetrate leaf surfaces quickly and resist washing without the addition of a surfactant.

The non-selective herbicides, which are all water soluble, will kill or injure any plants they are applied to. For this reason, they should not be sprayed on or near your lawn—unless the lawn is your intended victim.

Motooka says most over-the-counter herbicides are relatively safe; they are no more toxic than aspirin or table salt. There are important exceptions. Dangerous herbicides are restricted, however, and in most cases may be used only by certified applicators who have had special training.

Each herbicide is assigned a signal word to alert potential users about its degree of toxicity; this is expressed as the amount that would kill a 150-pound person if the herbicide were swallowed:

—DANGER means 1 teaspoon or less;

—WARNING means 1 teaspoon to 1 tablespoon;

—CAUTION means 1 ounce to 1 pint.

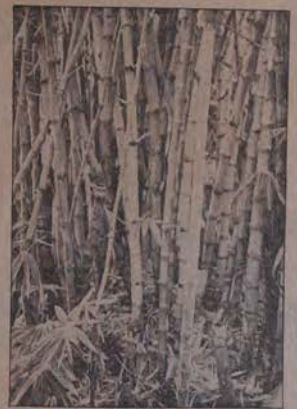
In each case, of course, it would take even less herbicide to kill a child or a small animal. For this reason, it is extremely important that all herbicides be used according to the directions on the label and stored carefully in their original containers, out of reach of children. Empty containers must be disposed of promptly and safely. Don't overlook any equipment or clothing that may have come in contact with a herbicide; prolonged skin contact may be harmful also.

There is no evidence of long-term health effects in humans from the normal use of herbicides, says Motooka. On the other hand, there are many documented injuries and even a few deaths each year owing to the careless use of machetes, chain saws, lawn mowers and other garden tools.

Because the list of government-approved herbicides changes periodically as safer, more effective ones are added to replace others that have been removed, it is best to check with your nearest county extension agent before using anything that has been sitting around the garage for a while. Generally, if a herbicide is still on the shelf at your neighborhood garden shop, it is still on the approved list.

The effectiveness of a herbicide depends on what you are trying to kill and your chosen method of application. Next week's column will cover three application methods and the advantages and disadvantages of each.

(Jan Everly Williams is agriculture publications editor, College of Tropical Agriculture and Human Relations, University of Hawaii.)



Chemical control of unwanted plants is much easier than trying to dig them out.

Hunt

Park provides a bit of sanity in downtown's jumble

By Jay Hartwell
Advertiser Staff Writer

Advertiser photos by Charles Okamura

Liz Huppman prunes fan palms, above, while Matthew Kwock vacuums a Tamarind pool that features Henry Moore's sculpture, "Upright Motive No. 9," at right.

In the din of downtown Honolulu there's one place where it's always safe, always clean and always green.

The sanctuary is Tamarind Park, the one-acre private park at the corner of Bishop and King streets, which opened 18 months ago. Since then it has become a favorite place for those who need an urban oasis with invisible walls.

On the second and fourth Wednesdays of each month, Bishop Square Management Inc., which takes care of the park, brings in the symphony or other musicians, but usually this a tranquil place, with blue pools and St. Augustine grass that soften the metropolis.

Tamarind's beauty is only skin deep, which you'd discover if you tried to dig a hole to Botswana. After 10 feet, your shovel probably would strike the trunk of a Cadillac, parked in an underground garage where reserved stalls rent for $175 a month.

To prevent the park from caving in on the cars, landscape architect Jim Hubbard used a lightweight mixture of topsoil and crushed volcanic cinders from Maui, which form an 18-[illegible] blanket over Tamarind.

The park's wiliwili, kukui and two monkeypod trees, which stand 40 feet tall, required deeper dirt, so Hubbard asked Northwestern Mutual Life Insurance Co., the building's developers, to build five, 12-foot deep concrete planters that were sunk into the floor of the garage.

Winter and spring winds have ravaged the monkeypods, helped defoliate the kukui and Singapore plumeria, shredded the hibiscus and fan palms and blown rubbish into the pools.

"The more the wind blows, the more leaves you got (to clean)," said Matthew Kwock, the park's maintenance man who takes care of the 15 pools.

On most Mondays through Fridays, 7:30 a.m. to 4 p.m., the Kaimuki High graduate scoops out leaves and trash, vacuums up the dirt and grass cuttings, regulates the chlorine and pH levels, maintains five underground circulation pumps and cleans dirt out of two filter traps.

The pumps keep the 431,623 of gallons water from stagnating, but don't stop children from sailing boats made from styrofoam cups.

Liz Huppman, a Maryland native, is the park ranger. She was finishing her master's degree in horticulture at the University of Hawaii when she heard Tamarind needed a caretaker.

Since graduating 19 months ago, she's been trimming, mowing, watering, fertilizing and spraying insecticide.

On a recent morning, she was pulling dead leaves, paper cups and a tattered pair of headphones out of the lauae ferns. "Usually I wear gloves. I don't know what I'm going to pull out."

A sprinkler system waters the big trees and lawns, leaving the cement planters to Huppman's hose. The 28 and 30 stories of the Pauahi and Pacific towers shield some of the leeward plants from rain, and Huppman sometimes has to water them when it's pouring. "People think I'm nuts."

When the wind isn't ripping up plants, some people try to yank the portulaca groundcover out of the planters. Others shortcut through the mondo grass, wearing the lawn to a dirt path.

"People use the plants as ashtrays. I don't like that either," Huppman said. "Basically it's a pretty nice job and I'm on my own. I wouldn't want to be inside."

Most of the time, you'll find Jonathan Limpaham, a Castle High graduate, doing carpentry [illegible]. But he's also a tile layer who patches the park's concrete [illegible] equipment dollied up and down the stairs.

Twice now, he's also made repairs after a car took a premature left turn from Bishop Street and landed in a pool.

Bud Cox, chief engineer for the Bishop Plaza complex, is their boss. He also oversees the complex's janitors, who sweep the walks, empty the garbage cans and pick up the windblown garden chairs, tables and umbrellas that are spread around the site. Anywhere else in Honolulu, the furniture would be chained to the ground. Not Tamarind. "If I lose them, I blame security," Cox said.

Chief George Krater and his 14 security guards (three men work an eight-hour shift) keep Tamarind Park safe. "We're here to make sure our people are there to have a good time and not be bothered by undesirables."

Downtown's resident "undesirables" have received enough warnings and now stay out of the park, Krater said. The malihini are watched by three RCA cameras, whose infrared lenses zoom in and out, day and night.

When a hobo appears on security's monitor, a guard is dispatched to shoo away the nuisance. At night, security can talk to and listen to them through two speakers that are screwed into the wiliwili tree. "We can ask them to leave without having to go out there," said Krater.

Another park rule is no sleeping, but Krater said, "We're fairly liberal during lunch time."

In memoriam

Ellis F. Clark '15, of Newington, Conn., died May 13 after a long illness. After graduate study at Cornell Univ., he founded vocational agriculture programs at Woodbury (Conn.) High School and, later, at Nonnewaug High School. From 1920-55, he was head of Woodbury's vo-ag dept., and was credited with starting night school courses for farmers. In 1960, Woodbury High School named its newly opened vocational center after him. He was a member and officer of Future Farmers of America. A former instructor with the Conn. education dept., he was also a veterans' training supervisor for the Woodbury Board of Education, and was secretary-treasurer for the Woodbury Cooperative Assn. He was a consultant in the production and marketing of both milk and cattle, and operated a 400-acre dairy farm. He was active in civic and professional organizations, and was on the Woodbury Town Hall Commission. He leaves two daughters, a granddaughter, and a great-grandson.

William C. Greene '32, of Bloomfield, Conn., died recently at the age of 75. For 33 years he had worked as a landscape architect for the State of Connecticut. He also worked for five years for the U.S. Dept. of Transportation, Washington, D.C. While living in Sharon, Conn., he was a member of the Conservation and Inland Wetland Commission. A strong advocate of developing state roadside and picnic areas, he worked with the Conn. highway beautification programs and the Bloomfield flood control programs. He was a member of many professional societies, and after retiring was active in various civic organizations. He was first president of the Bloomfield Little League. He leaves his wife, three sons, two stepchildren, a brother, and eight grandchildren.

Joseph F. Zielinski '34 died June 30 after a brief illness. He was 72. A graduate of Jefferson Medical College in Pennsylvania, he was a veteran of WWII serving as a major in the Army Medical Corps. In 1946 he became chief of radiology at Holyoke (Mass.) Hospital, a position he held for 29 years before retiring. He was also chief of radiology at Mary Lane Hospital in Ware, Mass. He moved to Hyannis in 1978 where he was a member of the Hyannisport Golf Club. He belonged to a number of professional associations and was a past president of the radiology section of the Mass. Medical Society. He leaves his wife, two sons, two daughters, three grandchildren.

Food processing entrepreneur and author

Norman W. Desrosier '46, '48G, '50PhD died May 23 at the age of 62. Formerly of Athol, Mass., he was living in Wilton, Conn., at the time of his death.

A food scientist whose books on food technology received worldwide attention, he was founder and president of The New Product Co., which opened in Ho Ho Kus, N.J., and later moved to Westport, Conn. He held several patents in the food processing field, and in 1983 he founded "The Inventors' School" lecture course series and wrote *The Inventor's Guide*. During his career, he was corporate director of research and development at Nabisco Inc. for eight years, and vice president of research and development at Beech-Nut Life Saver Co. from 1961-64, during which time he invented Carefree Gum.

He was a pioneer worker for peaceful applications of atomic power, and a member of the four-person U.S. Atoms for Peace Mission to Western Europe in 1958.

He graduated from Athol High School in 1939, and attended UMass for three years before joining the Army in 1943. He served in a number of European campaigns and received the Purple Heart and Bronze Star. After completing his studies at UMass, he joined Purdue Univ. as an assistant professor and became the university's youngest tenured associate professor.

He wrote a dozen books on food technology, most notably *The Technology of Food Preservation*, published in 1959, and *Attack on Starvation*, a 1961 study of man's increasing food demands in the face of the world's exploding population, which was translated into more than a dozen languages and distributed worldwide by the U.S. government. He leaves his wife, mother, three sons, a daughter, a brother, two sisters, and two grandchildren.

Colette U. Powers '65G(ED), of Dresden, Me., died recently after a long illness. She was 61. She was a teacher at Franklin County Hearing League, Greenfield, Mass., a teaching principal at Montague (Mass.) Center School, and taught data processing in the Amherst public school system. She also co-authored a book on data processing. She leaves her husband, mother, four sisters, and several nieces and nephews.

been a canteen manager at the VA Hospital in Martinsburg, W.Va. He leaves his parents, maternal grandmother, two brothers, and a sister.

Faculty and staff

Fred V. Cahill Jr. died May 23 in Raleigh, N.C., after a long illness. He was 68. He joined the UMass faculty in 1953, chairing what was then the government dept. (now the dept. of political science). In 1955 he was named first dean of the College of Arts

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Star-Bulletin Honolulu Thursday, January 17, 1985

Sharing the Bishop Museum With Everyone

By Lois Taylor
Star-Bulletin Writer

THE Bishop Museum is an imposing pile of gray rocks that looks as if it were designed by Charles Addams. The pickled shark and the foot-long bugs are part of the picture, but somehow in the last six months the museum has become a warmer, friendlier place. This happened at about the same time as the arrival of its newest director, W. Donald Duckworth.

"There is no real validity to the energy and expense of caring for this collection if it isn't shared. Otherwise, we might just as well dig a vault and put everything into it," Duckworth said. "The need to preserve its collection in perpetuity is the moral, legal and ethical duty of a museum, but there is another contemporary need—sharing it with as many people as possible."

Duckworth has headed the museum since August, and from the beginning he has said that an outreach program to bring in more people was one of his major goals. "I am anxious to get every piece of public space in use. We are planning a new building right now, paid for with money raised three years ago. It was to have gone for collection storage, but from my perspective—I've had the opportunity to rethink this—it seems more important to create more public space."

Duckworth has reinforced this by using a peculiarly shaped alcove between the gift shop and the restaurant for his own office. The walls aren't parallel and the room enjoys a view of the parking lot, but it is distinguished by its magnificent missionary-period koa furniture. He pushed aside a draft of a mailing going to museum supporters, lit a cigarette and began with great enthusiasm to talk of his plans for the Bishop Museum.

"I've started a large project to renovate and restore Hawaiian Hall (the main, three-story building of the museum.) It is an extraordinary piece of museum space in the whole world—100 years old and a fine example of Victorian architecture. It's a museum piece in itself."

Duckworth came to the Bishop Museum after 26 years with the Smithsonian Institution in Washington, D.C., and a second aim is to achieve their free admission policy. "I want either to eliminate or lower substantially the $4.50 entrance charge to the museum. The Smithsonian has no admission and that says, 'Please visit us, and come often.'"

Nationally, museum directors have seen an increase in visitors and while they aren't sure of the reason, Duckworth said that they have a few theories. "There is a need on the part of people in an uncertain world for the certainty that museums represent. There is a solace in the past. You can lose a handle on a world that moves so fast.

"Both museums themselves and the public in general have come to realize that museums are a major education medium in a world of two dimensions—books, TV, movies. In a museum, they see the third dimension of actuality, honest-to-God three dimensional real things."

The major preoccupation of the staff and trustees of the museum for the next six months is "a self-evaluation process," Duckworth said. "We want to identify how we are perceived by those who have more than a passing knowledge of the museum—legislators, educators, OHA board members, trusts and foundations. We're sending questionnaires to 800 people. Their answers will tell us how they think of us against what we consider ourselves to be.

"It's my opinion after 24 years in the museum business, by and large this has not been as much a museum as a research institute. It is world-renowned and has a fine reputation that I do not intend to dilute or sully, but we must activate appropriate public programs.

"We have a very exciting thing here. We are holders in trust of the tangible evidence of the Hawaiian culture for people here to see and enjoy. This is different from the Smithsonian where members of the cultures represented in the exhibits are nowhere nearby. A South American Indian exhibit or a Maori exhibit doesn't draw many people of either group."

Bishop Museum director W. Donald Duckworth: 'There is a need on the part of people in an uncertain world for the certainty that museums represent. There is a solace in the past...'—Star-Bulletin photo by Dean Sensui.

Duckworth joined the staff of the Smithsonian at the age of 24, in the final stages of work on his doctorate in entomology from North Carolina State. "I went through the ranks until I became a curator at the Natural History Museum, a fabulous place. Then I began to work part-time in management for the institution. Part-time became half-time, half-time became full-time. The Smithsonian is a large umbrella for 13 museums, the National Zoo and a worldwide organization of research," he said.

When he left the museum last spring, in addition to his job as curator, he was special assistant to the assistant secretary for museum programs at the Smithsonian Institution. Does he miss it? "There was some subliminal anxiety about the move," he said. "Washington is at the hub of everything and the Smithsonian is the largest and grandest museum complex in the world. And I thought I couldn't live without the *Washington Post*. But I have."

Then came the question that W. Donald Duckworth inevitably has to field. Whatever the W. stands for, wouldn't it be an easier name to live with than the one he uses? "For one thing, Disney didn't invent Donald Duck until a year after I was born," he said.

"The 'W' stands for Walter, the mandatory name for the eldest male in each generation. I grew up in the mountains of Tennessee near the area where 'Deliverance' was filmed. It's rugged country, not easily accessible. Most of our families had lived there since the 1700s.

"Donald was plugged in as a middle name, but my aunt liked it and always called me that. Then everybody else did. By the time I realized my first name was Walter, I had fought all the fights, heard all the duck jokes, and I began to wear my name as a flag."

Duckworth plans to show the same grit in popularizing his museum. "We are recognizing that museums aren't 'Temples of Culture' where you go quietly, hat in hand," he said. "They are active civic centers where you can come and see people at work, celebrating their culture. There's a magic in this. There's an inherent excitement here and extraordinary potential. I am genuinely excited about what this museum can be."

genius. He's developed a revolutionary new treatment for heart disease. There's no doubt whatsoever that his therapy offers new hope for millions of Americans who suffer from heart problems."

Dr. Gordon used potassium and magnesium to treat over 700 of his cardiac patients over two years. "And 85 percent of them got dramatic relief of symptoms," he said.

Although one-third of his patients had had previous heart attacks and all were suffering from serious heart disease, Dr. Gordon enthused, "less than 1 percent succumbed later to a new heart attack."

More than one million victims will die from heart disease in 1978, according to the American Heart Assn. "But the Nieper therapy could save more than 900,000 of those lives," said Dr. Gordon.

— JOHN COOKE

Otto Degener's Immense Work Now Two Books

FLORA HAWAIIENSIS or NEW ILLUSTRATED FLORA OF THE HAWAIIAN ISLANDS. By Otto Degener, B.S., M.S.

Otto Degener, formerly botanist at the University of Hawaii (1923-27) and naturalist at Hawaii National Park (1929), at present collaborator in Hawaiian Botany, New York Botanical Garden, has now brought to two volumes of approximately 300

OTTO DEGENER

pages each his monumental study of the ferns and flowering plants of Hawaii.

The book is one of the sort undertaken only by those who early envisage an articulated life program and devote to it the energies of all their days. Mr. Degener's task has already been the occupation of several years and the publication, by its loose leaf binding, is so planned that its new portions as they may be inserted in their correct places.

The book says of itself:

"The Flora Hawaiiensis will present, in concise, yet complete, illustrated descriptions of all the native and foreign Ferns and Flowering Plants growing in the Hawaiian Islands.

It will give the common English, Hawaiian, and the one correct botanic name of each plant, as well as the synonyms by which it is known in other publications.

"It will state whether the plant is endemic, indigenous or introduced; it will give the exact range of the plant in these islands and its general range elsewhere; and it will give its present and former uses and such other information as may be of interest or importance.

"It will include keys for the determination of families, genera and species.

In addition, it will contain a general description of the islands, maps, accounts of the origin of the Hawaiian flora, an historical sketch of Hawaiian botany, a glossary of botanical terms, an index, etc."

This gigantic promise has already been fulfilled to the extent of Books I and II.

The plant descriptions are consistently accompanied by full page drawings in black and white of Opuntia megacantha, the wild-

HONOLULU STAR-BULLETIN
SEPTEMBER 21, 1935

botany news
University of Massachusetts at Amherst

Undergraduate Review

During the last week in April we had the pleasure of a visit by Drs. William Jensen (Berkeley) and William Stern (Gainesville), as well as ten inches of snow. These tropical migrants were here to assess our curriculum for the undergraduates on behalf of the new Board of Regents. It is our understanding that they found the experience "refreshing" — at least the term "moribund" did not surface. Their report was generally complementary to the Department. Much credit for this may properly belong to the alumni, as mention was made of the many success stories of our graduates. One of the benefits of this assessment procedure was that we did get to hear from some of these graduates and to find out that the outside world still needs (and occasionally likes) botanists. The not-so-cheerful side of this review issue is that some of us fear that we may find ourselves fighting once more the administration's desire to create biology units. While we were not singled out for examination, past experience tells us that these kinds of assessments can readily be used for re-organization purposes — no matter how highly regarded we are by our peers.

Distinguished Teacher Award

This spring Seymour Shapiro was selected for the Distinguished Teacher Award — one of three faculty members so honored. This, of course, was not a complete surprise. During his career at this institution, Seymour has garnered many recognitions — the Metawampee Award from the undergraduate Student Government Association, the Board of Trustees' University Medal for Outstanding Service, and selection as commencement speaker, to mention a few. He continues to put his energies into the introductory courses and also offers honors sections for the select few. Most significantly, the doors to his lab and home seem to be forever open to all comers. No one comes away from a visit with Seymour without being tremendously impressed by his genuine interest in the individual — a prime example that a person need not become a number at a large university!

Visitor from Australia

During the fall of 1983 the Department enjoyed the visit of Professor B.E.S. Gunning, Head of the Department of Developmental Biology of the Research School of Biological Science of the Australian National University at Canberra. Dr. Gunning, a Fellow of the Australian Academy of Science and the Royal Society of London, was reciprocating Dr. Hepler's Australian visit. While here Brian and Peter continued to pursue their common interests — the function of microtubules in the control of cellular processes such as cell plate formation. Brian used microinjection and microsurgery techniques on cells of *Tradescantia* stamen hairs and was able to demonstrate that by highly localized disturbance of the cytoskeleton (preprophase band) cell plate formation in that region could be prevented. Brian gave many lectures to the Department as well as to many institutions in and beyond this valley. His work on cell lineages in roots of *Azolla*, the water fern is, of course, a classic but he held us equally fascinated when he dealt with the nitrogen fixing blue-green alga which inhabit this plant. We will long remember Brian's pleasant smile, clever wit, and ever readiness to participate in departmental activities. His presence added much to the success of our fall trip to Cape Cod.

Brian Gunning.
Photo by Paul Godfrey

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Edward L. Davis, Head
Department of Botany
Morrill Science Center
University of Massachusetts
Amherst, MA 01003

The Trustees
of the
Bernice Pauahi Bishop Museum
are pleased to announce
the appointment of

W. Donald Duckworth

as

Director

Effective 1 August 1984
Dr. Duckworth
may be reached at (808) 847-3511

Bernice Pauahi Bishop Museum
P.O. Box 19000-A
Honolulu, Hawai'i 96817

Linus H. Jones '16, '19G died June 21. He was 90. A professor of plant pathology in the UMass botany dept. from 1925-58, he earned his PhD at Rutgers Univ. At UMass, he was also associated with the Experiment Station. He was a member of the Pacific Lodge of Masons A.F. & A.M. in Amherst, and a member of the American Society for the Advancement of Science. He leaves his wife of 57 years, two sons, and seven grandchildren.