



Hunt Institute for Botanical Documentation  
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#### *About the Institute*

The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

1, at note felt

UNITED STATES DEPARTMENT OF AGRICULTURE,  
BUREAU OF PLANT INDUSTRY,  
WASHINGTON, D. C.

OFFICE OF THE BOTANIST.

*Riccia setchensis*

*Scirpus lacustris occidentalis*

*Evernia vulpina*

*Nymphaea polysepala* - 2 drawings

Please see that the original drawings of  
the above are returned from the lithographers.

# NOTICE

In the past, 100 complete as well as incomplete sets of fascicles of the Flora Hawaiiensis were distributed gratis on date of publication to approximately 150 interested individuals or institutions. Due to the ever-increasing costs of publication and mailing, this practice cannot be continued. Those interested in receiving a complete set of future fascicles of Book 6 on date of publication, however, may order these by payment in advance of \$10.00. Complete, bound copies of Book 6, at a greatly reduced price, will be available for purchase at a later date.

Drs. Degener  
Waialua, Oahu, Hawaii

Oct. 19<sup>th</sup>

Dear Otto & Pa,

Of course you may  
have my house, but please  
telephone to Hazel Krindley  
1 phone 9264151  
now living at 2087 Kee au-  
moku St. Honolulu 14. - please  
must be available there information,  
and tell her when you want it.  
I have told her that she  
can use it as her own house,  
as she has none at present  
in Hawaii. She says she doesn't  
think she'll need it - until  
next summer, and I'll  
write her that you'll please



or call or both. She is an  
amusing person and she'd  
like to have you drop in &  
know. Her grandson was  
with her, but Karen, her  
daughter and husband are  
now at Pearl Harbor for  
two years, so she probably is  
alone in the house and  
braking it. Enclosed is  
a letter to Mr. Cliff  
which you can send him  
when you have arranged  
about the time with  
Hayel.

Oct 19

I hope your op. will make you  
feel wonderful as time goes on, day  
after day, but as do go back to  
normal life very slowly.

The more you baby yourself  
the quicker you will be well.

A hard task, I know for a  
reason like you. I may  
be in Zurich after Christmas.

I lost my old address book  
with your parents address, but  
if you would send it, I

might get to Freiburg this  
winter. I am not sure of  
my plans yet, but I don't

want to go home yet - I  
have invitations for the winter -  
Jan - to Munich, for Tausig,  
Adelstein, Abala and the Seydies,  
and India - but don't  
know yet which I shall  
do.

I absolutely love it over  
here, especially in London,  
and while it is gloomy  
out doors it is never very cold.  
The concerts and lectures  
lectures etc. keep me  
so well amused and  
enchanted with life -  
your trip sounds fine - Wish I  
could see you - much able  
from Betty [anner]

<b>HAWAIIAN AIRLINES LIMITED</b>				<b>AGENT'S COUPON</b>		FORM	<b>OS-2</b>		<b>B</b>	<b>77426</b>
OLD SUBJECT TO TARIFF REGULATIONS										
NOT GOOD FOR PASSAGE										
FROM		1-HONOLULU	3-LANAI	5-HANA	8-KAMUELA	DATE		DEPARTURE FLIGHT		
0-KAUAI		2-MOLOKAI	4-KAHULUI	6-UPOLU	7-KONA	9-HILO	1/15		AM	
TO		1-HONOLULU	3-LANAI	5-HANA	8-KAMUELA			PM		
0-KAUAI		2-MOLOKAI	4-KAHULUI	6-UPOLU	7-KONA	9-HILO			AM	
TO		1-HONOLULU	3-LANAI	5-HANA	8-KAMUELA			PM		
0-KAUAI		2-MOLOKAI	4-KAHULUI	6-UPOLU	7-KONA	9-HILO				
COMPLETE ROUTING (ALL TICKETS)		CONJ. TKT. NO.		ISSUED IN EXCHANGE FOR:		FARE \$		12.00		
FROM		NOT GOOD UNLESS VALIDATED		6TR PO ATP ACC XO IW		TAX \$		1.40		
TO		No.		NAME		EMPL. DISC.		TOTAL \$		
TO		By: [Signature]		MR. NARD FLEMING		NO. PSGRS.		1		

PLANTS OF HAWAII  
EX HERBARIUM OTTO DEGENER

No.

COLLECTED BY OTTO DEGENER  
AND ISA DEGENER

"PLANTS HAW. NAT. PARK" & NEW ILLUSTRATED "FLORA HAWAIIENSIS" AVAILABLE FROM  
DRS. DEGENER, WAIĀLUA, OAHU, HAWAII.



From  
Dr. Ba Degener

---

N.S.F. 3. Grant

Waialua, Oahu.  
Friday.

Dear Tom:

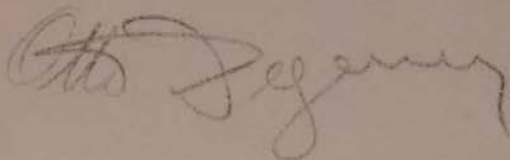
I have your bill for the last Flora job. I am sorry I must ask you to change it. That 307 : Jacquemontia : Sandwicensis printing is worthless due to my own mistake. I cannot expect Washington to pay for that. In fact, I don't even want them to know that I was dumb careless. So, please bill me separately for the 30000 Jacquemontia sheets.

Then give me a bill, in triplicate for the remaining nine sheets, which bills go to the business office of the New York Botanical Garden for transmittal to Washington. These bills should be itemized, you in addition typing cost of EACH sheet on EACH sheet as you did on the lot submitted with your new prices to New York B. G., a couple months ago. I hope the sheets with reverse blank are convincingly reasonable in price.

By the way, N.Y.B.G., in answer to your prices, stated that their magazine Mycologia was printed a bit cheaper (somewhere in the Midwest). I wrote I preferred a local concern as it avoids nuisance in mailing proof back & forth, etc. If you could grant a little discount for example for immediate payment of bills, there never would be any grumbling from N.Y. Remember that I am not boss; N.Y., is.

New York just mailed me a cheque for \$,1000 so you more better wiki wiki me the revised bills with annotated samples so I can pay you by return mail. And keep my nose to the grindstone with galleys of new stuff so I can print another form lest I use the rest of the cash on botanizing trips in Kauai.

Aloha,





GRANT BALANCE  
ADJUSTMENT NOTICE

Date \_\_\_\_\_

TO: National Science Foundation  
ATTN: Finance Office  
Washington 25, D.C.

FROM: 000 0000

We wish to notify you that an adjustment has been effected on the following grant:

GRANT NUMBER \_\_\_\_\_

DATE OF GRANT \_\_\_\_\_

AMOUNT OF AWARD \_\_\_\_\_

AMOUNT OF ADJUSTMENT \_\_\_\_\_ \*

We have changed our records in the amount of this adjustment.

SIGNED \_\_\_\_\_

TITLE \_\_\_\_\_

FOR NSF USE ONLY	
J. V. NO.	
POSTED	

NSF FORM 4-53  
AUG 1961

GPO 942526

FORM APPROVED BY THE COMPTROLLER GENERAL, U.S., 9-61

\*Adjustment defined as any change  
in the dollar requirements of a  
grant.

memo

Date \_\_\_\_\_

to \_\_\_\_\_

From \_\_\_\_\_

Rent — 180.00

Utilities — 30.00

Plants (2) — 100.00

Plants (1) — 25.00

Teep 375.00

Food 450.00

Post. & Air 75.00

Freight 100.00

Equipment 100.00

1335.00



COMMERCIAL PRINTING DIVISION  
ADVERTISER PUBLISHING COMPANY • PHONE 513-151  
629 POHUKAINA STREET, HONOLULU

memo

Date \_\_\_\_\_

to \_\_\_\_\_

From \_\_\_\_\_

Housing:

Preis: 2 Bedr.

near Desha 2

Refriger, stove, etc.

inside or not 2

Any difference in  
rent if we rent  
for  $\pm$  10 months?



COMMERCIAL PRINTING DIVISION  
ADVERTISER PUBLISHING COMPANY & PHONE 513-151  
628 POHUKAIA STREET, HONOLULU

Can we ship  
food, equipment.  
maybe rats etc  
on the Hole Barge?  
If so, how long  
before we ourselves  
reach there?  
Hole

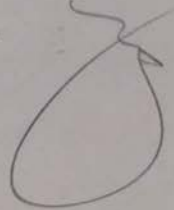
Art work for

Peucedanum

draw

By Pogonca

E. Sprague



Trip report  
Molokai, Maui, Hawaii

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Transp. 465.13 -

Insurance 29.60 -  
for assist.

Food and Lodg. 285.59 -

Postage 38.74 -

Supplies Equip. 36.39 -

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855.45

15.63 =  
52.02

165.58  
100.00

Dear Hale Tegen

I received your letter, it was addressed to Kola.  
my address is Waimea.

The keys I will leave in a paper bag in the wood  
box, the wood box is just out side the door,

There is plenty fire wood, but there is no blankets.  
Mrs. Tanner took them some other place before  
she left. I will get the hot water heater going  
and the ice box on the 14<sup>th</sup> so every thing will be  
ready for you when you come.

our lamps are not very good, so if you have a  
gas lamp or two it would be well to bring them

Mr. George Cliff

Waimea Kauai

14<sup>th</sup> April

I will try to be here when you come.



## THE NEW YORK BOTANICAL GARDEN

## STATEMENT OF ACCOUNT

INVOICE DATE

AMOUNT OF INVOICE

AMOUNT

ACCOUNT NO.

326

Sorry for delay in sending this. check. Will write about details later.

DETACH THIS STATEMENT BEFORE DEPOSITING CHECK

**REGULATIONS RELATING TO AUTOMOBILE REGISTRATION EVERY CAR OWNER SHOULD KNOW.**

1. **TAX EXEMPTION ON CAR IN STORAGE.** Upon placing any car in storage, surrender to the treasurer's office current license plates and file necessary papers not later than December 31st to arrange for tax exemption from January 1st of the following year. If plates are surrendered after December 31st, tax exemption or refund will be computed on quarterly basis.
2. **RECHECK RECONSTRUCTED CAR.** Any reconstructed car must be rechecked and re-weighed so that proper description of the car and new weight may be obtained.
3. **CHECKING AND WEIGHING HOURS.** Ordinarily the checking and weighing hours are from 9:30 a.m. to 11:00 a.m. and from 3:30 p.m. to 4:30 p.m.; however, during the annual registration period additional hours are allotted. The Municipal Scale is located on Koula Street, extension off Ala Moana Road.
4. **WEIGHING AND CHECKING OF PASSENGER CAR MAY NOT BE NECESSARY.** Application for first registration of any passenger car manufactured after 1949 may be made upon presenting the actual impression of factory serial number on special form furnished by the treasurer, without having the car weighed and checked.
5. **NO TAX FOR BALANCE OF YEAR ON CAR BROUGHT INTO THE TERRITORY.** Any car brought into the Territory will be free from taxation for the unexpired term if such car has been previously registered in any state. However, a permit to operate the same must be applied for at the treasurer's office within ten days after arrival.

(over)

6. REFUND OF UNEXPIRED TAX ON CAR PERMANENTLY JUNKED OR SHIPPED OUT OF THE TERRITORY. Upon permanently junking or shipping out of the Territory any car, surrender current license plates and apply for refund of unexpired tax for the balance of the calendar year.
7. RENEWAL OF REGISTRATION OF CAR NOT LOCATED WITHIN THE TERRITORY. Registration of any car owned by a bona fide resident of the Territory previously registered with the treasurer may be renewed although such car may not be located within the Territory.
8. LOST, MUTILATED OR ILLEGIBLE LICENSE PLATE OR WINDSHIELD STICKER. When any license plate or windshield sticker is lost, mutilated or becomes illegible, a new set of plates or a new sticker must be applied for upon a form furnished by the treasurer. The plate or plates to be replaced must be surrendered to the treasurer's office. The fee is \$1.00 for a new set of plates and 25¢ for a sticker as required by law.
9. LOST, MUTILATED OR ILLEGIBLE CERTIFICATE. When a registration or an ownership certificate is lost, mutilated or becomes illegible, a duplicate certificate must be applied for upon a form furnished by the treasurer. The fee is \$1.00 for a duplicate certificate as required under a new law passed by the 1955 Legislature.

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The foregoing regulations have been printed for your information and future reference.

Please take advantage of any special service rendered to facilitate your business with the City and County Treasurer's Office.

**LAWRENCE S. GOTO**  
City and County Treasurer

Modern Printing

RESEARCH PROPOSAL SUBMITTED TO  
THE NATIONAL SCIENCE FOUNDATION

APRIL 18, 1958

1. Institution: The New York Botanical Garden, New York 58, N.Y.
2. Principal Investigator: William C. Steere
3. Title of Proposed Research: Arctic American Mosses --Their  
Systematics and Geographical Distribution.
4. Desired Starting Date: July 15, 1958.
5. Time period for which support is requested: 5 years.
6. Budget requested: \$29,900.

## Research Proposal submitted to the National Science Foundation

April 18, 1958

1. Institution: New York Botanical Garden, New York 58, N.Y.
2. Principal investigator: William C. Steere
3. Title of proposed research: Arctic American Mosses --Their  
Systematics and Geographical Distribution.

4. Desired starting date: July 15, 1958

5. Time period for which support is requested: 5 years.

6. Description and Background of Proposed Research: Mosses and hepatics play an important role in the tundra vegetation of arctic America, and in some areas become the conspicuous or even dominant element. Yet, until relatively recently, the importance of these small plants in the arctic environment has been overlooked or treated quite as of secondary importance by specialists in other fields. Nevertheless, monumental collections of bryophytes were made on Ellesmere and Devon islands in the northernmost Canadian arctic during the Norwegian "Fram" expedition (1898-1902) by Simmons, a specialist in higher plants (Bryhn, 1906-1907). Excellent collections were made on Cornwallis Island by Wilfred Schofield (Steere, 1951) during an insect survey, and on Prince Patrick Island by Charles Handley, Jr. (Steere, 1955a) during research on mammals. Over a period of fifty years, this sometimes intensive and sometimes casual collection of bryophytes in arctic America by non-bryologists has given us a very considerable accumulation of material and of information (Steere, 1948). At the moment a half-dozen interesting collections made in arctic America by W. J. Cody, Pierre Dansereau, W. S. Benninghoff, R. M. Schuster, and others,



are in hand, but still incompletely studied.

Recent and growing interest in problems of arctic environment, more often than not related to military questions, has finally brought about the realization in various fields of science that more must be known about arctic bryophytes. The moss carpet in northern areas reduces heat absorption during the summer and facilitates heat escape during the winter, so that it is directly related to permafrost formation. Because of their prevalence, arctic mosses must be studied carefully as an important adjunct in reading aerial photographs and in the interpretation of terrain and of trafficability. As a consequence of this need for information and of enormously increased facilities for travel in northern regions, it has finally been possible for a few specialists on mosses and hepatics to make field studies in arctic America. The present investigator has spent six seasons in the field in subarctic and arctic America, as follows: 1948, at Great Bear Lake and at Coppermine, N.W.T., Canada, on a contract between the Office of Naval Research and the University of Michigan; 1949, in central Alaska, as Senior Botanist, Alaska Terrain and Permafrost Section, U. S. Geological Survey; 1951, 1952, 1953, in many areas of arctic Alaska, working from the Arctic Research Laboratory at Point Barrow, on contracts between the Office of Naval Research and Stanford University, and on grants from the Arctic Institute of North America and from the National Science Foundation (NSF G-337); 1956, at the Canadian Defence Research Northern Laboratory, Churchill, Hudson Bay,

on a grant from the National Science Foundation (NSF G-2126).

In any group of organisms, the rarest and most interesting species are not apt to turn up in casual collections. Consequently, the visit of a specialist to an area not previously explored inevitably results in remarkable and unpredicted discoveries. Although the extensive collections made in these six field seasons are not yet fully studied, many interesting discoveries have been made (Steere, 1950, 1952, 1953a, b; 1954 a, b; 1955 a, b; 1956 a, b; 1958) and several general conclusions have been reached. In the past, because of lack of sufficient information and because of preconceived ideas, it was assumed that the arctic bryophyte flora was derived from the boreal flora directly south of it, by simple reduction in number of species and attenuation of vegetative growth. However, it is now possible to establish conclusively the existence of a truly arctic floristic element of mosses and hepatics, making possible the settlement of a question of long standing. This element is apparently circumpolar in its distribution rather than being restricted to two or three isolated centers of speciation, especially in Siberia and Ellesmere Island, as previously thought. The most typically arctic species are most probably survivors of a more widespread Tertiary or interglacial flora, as indicated by (a) the morphological distinctness of the species from any other living ones and the prevalence of monotypic genera, (b) their taxonomic relationship to species restricted to the southern hemisphere, in Oceania, Asia and South America, instead of the



north temperate regions (or even the northern tropical regions), and (c) their very wide, even though discontinuous, present-day geographical distribution in circumpolar regions (Steere 1953c, 1954a). An interesting feature of this endemic circumpolar group of species is that few of them appear to occur in Greenland, in spite of the close proximity of northernmost Greenland to northern Ellesmere Island, one of the richest areas. Probably because of its extensive non-glaciated areas, arctic Alaska is especially interesting in terms of its bryophytes, both in the truly arctic species and in the surprisingly large number of species that occur otherwise only south of the limit of glaciation and that are probably inter-glacial relicts north of the limit of glaciation (unpublished data). Cytological studies made at Point Barrow during the summer of 1953 and at Churchill during the summer of 1956 show that although some arctic mosses are highly polyploid, there is no statistical evidence from this group of plants to support strongly the idea that the rigors of increasingly high latitudes are directly reflected by increasing percentages of polyploidy (Hagerup, 1932; Löve and Löve, 1949; Steere, 1954b, 1955b).

7. Procedure: The impending move of the principal investigator (W. C. Steere) from Stanford University to The New York Botanical Garden, as of June 15, 1958, will greatly facilitate the work proposed here, because of the outstanding library and herbarium collections. The only permanent equipment required will be a binocular dissecting microscope and a binocular compound microscope. Since instruments of high

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degree of precision are not essential, it is estimated that both microscopes can be purchased for \$1,000 or less.

If this grant is made, it is proposed to proceed with the study and evaluation of the enormous collections already in hand, which have resulted from the extensive field work of the present investigator and of others. Several reports must be prepared for publication, covering special topics of systematics, ecology and geographical distribution, such as the description and illustration of new species, the taxonomic revision of difficult or badly understood genera, analyses of the associations of tundra species, ecology and arctic distribution of species normally occurring only much farther south, and further studies of the significance of some other anomalous geographical distributions. In addition to these, it is proposed to continue with a serious work on a longer term basis, the preparation of a comprehensive illustrated treatise of all arctic American mosses. No manual or monograph devoted specifically to boreal and arctic species now exists by which they may be identified readily, yet such a work is becoming more necessary each year, as interest in the arctic environment increases.

Fortunately, I was able to visit the more important arctic collections in Europe during the summer of 1954, in Copenhagen, Stockholm, Oslo, and Helsinki, and to spend some time in the field in arctic Sweden, through a grant from the Arctic Institute of North America, so that some important systematic and distributional questions are already solved. It will

still be necessary to study arctic collections in several American and Canadian institutions, to visit other libraries, and to consult specialists at other institutions.

Some more field work is still highly desirable in areas not yet explored, and is sure to be extremely rewarding. Some of the Alaskan areas visited were very productive of new and interesting species, and one of them, Driftwood, deserves to be revisited, since it is apparently unglaciated and rich in relict species. With the expanded activities of the Arctic Research Laboratory, it may well be possible to gain the support of this institution for travel and subsistence in Alaska, although travel from New York to Fairbanks will not be supplied. Other opportunities for arctic field work will certainly arise, because of the interest that some of my publications have aroused. I would like to visit some of the islands of the Canadian Arctic Archipelago which seem to be especially rich in bryophytes, as well as Greenland. Since travel can usually be arranged with MATS or other agencies, I have not included funds in the budget for travel as extensive as may actually be done.

As most of my collections (several thousand field numbers) are still in paper sheets, there is a very extensive routine task of sorting, packeting and labelling to be done, in addition to more specialized jobs. In spite of the routine, an interested graduate student could learn much from this work. Consequently the services of a graduate student assistant are requested, on a half-time basis. A half-time

artist will also be highly desirable for making maps, original drawings and preparing plates, both for journal articles and for the comprehensive work now under way.

8. Facilities: The New York Botanical Garden has one of the most complete libraries and herbaria in the world for research on bryophytes. Adequate laboratory space and permanent equipment will be provided by the Garden, with the exception of the microscopes already mentioned.

9. Personnel:

1. Principal investigator--William C. Steere (a biographical sketch is appended to this proposal). No salary for the principal investigator is being requested.

2. Research Assistant--Any interested graduate student working with me on bryophytes would be appropriate for this position.

3. Half-time Artist. I must have an artist who, by means of camera lucida, time and patience, can draw the delicate structures of mosses and hepatics, for the description of new species, for the preparation of monographic treatments, and to illustrate a comprehensive work.

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10. <u>Budget Estimate</u> (5 years)	1958- 59	1959- 60	1960- 61	1961- 62	1962- 63	5-year total
1. <u>Salaries:</u>						
a. Principal Investigator (William C. Steere)-	----	----	----	----	----	----
b. Research Assistant (Graduate student, one-half time)-	\$2000	\$2000	\$2000	\$2000	\$2000	\$10,000
c. Artist, one-half time, for maps, original drawings and plates-	1800	2000	2200	2400	2600	11,000
2. <u>Permanent Equipment</u> Furnished by New York Botanical Garden, except for:						
a. 1 binocular dissecting microscope:	400					400
b. 1 binocular compound microscope:	600					600
3. <u>Expendable Equipment and Supplies:</u> Photographic materials and services; drawing materials and equipment; photostats; shipping costs; misc. small needs (est. at ca. \$25 per month):	300	300	300	300	300	1,500
4. <u>Travel:</u> To museums and libraries; some addition- al field work in criti- cal arctic areas:	400	400	400	400	400	2,000
5. <u>Publication Costs:</u> Purchase of reprints (minimum estimate):	100	100	100	100	100	500
Totals	\$5600	\$4800	\$5000	\$5200	\$5400	\$26,000
6. <u>Indirect Costs (15%):</u>						3,900
7. <u>Total Budget Request:</u>						\$29,900



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William C. Steere, Principal Investigator

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David D. Keck, Acting Director,  
The New York Botanical Garden

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A. C. Pfander, Administrator,  
The New York Botanical Garden

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(Date)

Appendix--Biographical Sketch of Principal Investigator:

1. Personal: William Campbell Steere, born November 4, 1907, at Muskegon, Michigan; married June 14, 1927 to Dorothy C. Osborne; 3 children.

2. Educational and professional experience: University of Michigan, 1924-1929, 1931-1932, B.S., 1929; M.A., 1931; Ph.D., 1932. University of Pennsylvania, 1929-1931. Instructor in Biology, Temple University, 1929-1931 (while graduate student at Penn); Instructor in Botany, University of Michigan, 1931-1936; Assistant Professor, 1936-1942; Associate Professor 1942-1946; Professor, 1946-1950; Chairman, Department of Botany, 1947, 1950. Professor of Biology, Stanford University, 1950-1958; Dean of the Graduate Division, 1955-1958. Director, The New York Botanical Garden, 1958--; Professor of Botany, Columbia University, 1958--.

Additional experience: Exchange Professor, University of Puerto Rico, 1939-1940; Senior Botanist, Board of Economic Warfare Cinchona Missions, Colombia, 1942-1943, Ecuador, 1943-1944; Senior Botanist, Alaska Terrain and Permafrost Section, U.S. Geological Survey, 1949-1954; Program Director for Systematic Biology, National Science Foundation, 1954-1955; Technological Consultant, Foreign Operations Administration, Chile, April-July, 1955; Member of team to review Stanford University--Philippine Dept. of Education ICA contract, Philippine Islands (also Tokyo and Hong Kong), April-May, 1957.

Summers: 1932, Carnegie Institution--University of Michigan Expedition to Yucatan, Mexico; 1939-1942, 1945-1946,



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Staff member, University of Michigan Biological Station, Douglas Lake; 1948, University of Michigan Expedition to Great Bear Lake, N.W.T., Canada; 1949, Senior Botanist, U.S. Geological Survey, central Alaska and St. Lawrence Island; 1951-1953, Investigator, Arctic Research Laboratory, Point Barrow, Alaska; 1954, President, Section of Bryology, 8th International Botanical Congress, Paris, followed by field work and study in Scandinavia; 1956, Investigator, Canadian Defence Research Northern Laboratory, Fort Churchill, Hudson Bay.

Editorial Experience: Editor, Michigan Academy of Science, Arts and Letters, 1936-1940; Editor-in-Chief, the Bryologist, 1938-1954; American Journal of Botany, 1953-1957. Associate Editor, Annales Bryologici, 1938-1942; The Bryologist, 1954--.

3. Membership in Scientific Organizations: Fellow: Amer. Assoc. Adv. Sci. (Vice-President, 1948), Arctic Institute of North America, California Acad. Sci., Amer. Geographical Society. Corresponding Member: Instituto de Ciencias Naturales de Venezuela; Societas Zool.-Bot. Fennicae "Vanamo." Honorary Member: Instituto de Ciencias Naturales del Ecuador. Member: Botanical Society of Amer. (Chairman, Pacific Sect., 1953), American Bryological Society (President, 1936-1938), British Bryological Society, Torrey Botanical Club, Michigan Academy of Science, Arts and Letters, California Botanical Society (President, 1953), Society for the Study of Evolution, Society of American Naturalists (President, 1957), American Society of Plant Taxonomists, Western Society of Naturalists,

New England Botanical Society, American Fern Society, Sigma Xi, Phi Kappa Phi, etc.

4. Publications: Of some 135 papers by the investigator, the following bear directly on the attached proposal:

- W. C. Steere. 1938. Bryophyta of Arctic America. I. Species from Little Diomedé Island, Bering Strait, Alaska. Amer. Midl. Nat. 19: 436-439.
- , 1938. Barbula. In A. J. Grout, Moss Flora of North America north of Mexico. 1: 173-185. Plates 86-89.
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Several other manuscripts on arctic American bryophytes  
are nearly completed, among which the most important are con-  
cerned with Benninghoff's collection from Thule, Greenland,  
Schuster's collection from Alert, northernmost Ellesmere  
Island, as well as my own collections from Great Bear Lake.



## APPENDIX Degener 10

Hawaii 18

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Otto Degener, Principal Investigator

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William C. Steere, Director  
The New York Botanical Garden

---

Robert F. Kolkebeck, Assistant Director and  
Business Manager  
The New York Botanical Garden

April 18, 1961

88617 Crozier Drive, Waielua,  
Oahu, Hawaii.  
Jan. 3, 1958.

A.C. Smith,  
National Science Foundation,  
Washington 25, D.C.

Dear Dr. Smith:

I herewith submit six copies of Book 5 and the first fascicle of Book 6 of the "Flora Hawaiiana or New Illustrated Flora of the Hawaiian Islands." This project comes under Grant No. B-1819, sometimes called as G-2216.

Though printing expenses threaten to deplete remaining funds, we plan to publish this Spring on Kauai. Perhaps Dr. Steere of the New York Botanical Garden will follow Dr. Robbins' former kind efforts on my behalf and I apply for a new grant from the National Science Foundation. Mrs. Degener and I will have abundant material to publish as Book 6 if printing costs can be met.

Completion of Book 5 is gratifying, but it poses a serious problem which does handicap our botanical efforts. We now have in our home 223 different packages of Flora Hawaiiana sheets, each package 11 inches square. This means Mrs. Degener and I must eventually assemble and bind into 500 copies of Book 5. As it takes 20 to 25 minutes to assemble a single book, the task ahead of us will take sixty to seventy-five thousand hours of manual work. This work is not new to me, however, having lived through similar drudgery for each one of the previous books of the Flora Hawaiiana.

Mrs. Degener and I are extremely grateful that the Foundation has made possible to complete Book 5. May we have a list of 500 - 1,000 interested institutions and individuals to whom we could mail copies gratis? The books have no value unless used.

Yours very truly,

Otto Degener

FLORA HAWAIIENSIS

Family: 340  
Genus: Scaevola  
Species: Gaudichaudiana

GOODENIACEAE  
GOODENIA FAMILY

SCAEVOLA GAUDICHAUDIANA Cham.  
GAUDICHAUD SCAEVOLA; NAUPAKA

- Scaevola chamissoniana* sensu Hook. & Arn. Bot. Beech. 89. 1912. (As to Oahu plant only.)  
*Scaevola Gaudichaudiana* Cham. in Lian. 8. 226. 1831.  
*Scaevola ciliata* G. Don. Gen. Hist. Dichl. plants 3. 729. 1834.  
*Scaevola chamissoniana* sensu A. Gray in Proc. Am. Acad. 5. 152. 1861. (As to Oahu plant only.)  
*Scaevola chamissoniana* sensu H. Mann in Proc. Am. Acad. 7. 187. 1867. (As to Oahu plant only.)  
*Scaevola chamissoniana* sensu Wawa in Flora 56. 60. 1875. (As to Oahu plant only.)  
*Scaevola chamissoniana* sensu Krause in Engl. Pflzeich. 4 (277). 123. 1912. (As to Oahu plant only.)  
*Scaevola Chamissoniana* sensu Rock, Indig. Trees Haw. Isl. 495. 1913. (As to Oahu plants only.)  
Not *Scaevola Chamissoniana* Gaod. Voy. Freyc. Bot. 460. 1829. (Of Hawaii.)  
*Scaevola procera* sensu Skottsb. in Bull. B.P. Bishop Mus. 43. 33. 1927.  
Not *Scaevola procera* Hilkeb. Fl. Haw. Isl. 32. 1888.

Profusely twiggy shrub or erect tree up to 3 meters high with slender yellowish branches glabrous throughout except for white pubescence at youngest leaf axils and with light brown bark. Leaves broadly elliptic to obovate-lanceolate, light green, somewhat shiny, chartaceous, the often slightly inequilateral blade 5-13 cm. long and 2-5 cm. wide, entire except for upper half or third which is shallowly and distantly serrate with rarely more than 6 yellowish callous teeth per side, with thick yellowish prominent midrib beneath, acute to somewhat cuspidate at apex, acuminate at base into petiole which is 5-17 mm. long and glabrous to rarely glabrate at base. Flowers white but fading yellowish before falling, subtended by pair of linear subulate persistent bractlets, on 4-6 cm. long peduncle forming usually 10- to 17-flowered spreading dichasium at fruiting time often conspicuously zigzag and as long as or longer than leaves. Calyx less than 1 mm. long, consisting of a border with 5 obscure glabrous to glabrate irregular obtuse lobes persistent in fruit. Corolla tube 15-20 mm. long and when spread out flat 4 mm. wide, yellowish-green and glabrous without, white and puberulent within; lobes 8-12 mm. long and 4 mm. wide, undulately and prominently winged and cuspidate, white and glabrous within, on outer surface pubescent and yellowish-green except for white wings. Stamens glabrous, about 18 mm. long; pollen pale yellow. Ovary 3 mm. long and 1.5 mm. wide, ovoid, glabrous; style about 25 mm. long, pale greenish, spreading puberulent except for glabrous upper fourth; stigma 2 mm. broad and almost 1 mm. high, pale greenish-yellow. Fruit purple-black, shiny, glabrous, depressed-globose, 5-8 mm. long and 3-4 mm. thick, with purple juice, while unripe purple; endocarp 3-4 mm. long, 2-2.5 mm. wide, 1.5-2.2 mm. thick, rounded to truncate at base, sharply 1- to 2-cuspidate at apex, longitudinally indistinctly grooved and otherwise somewhat sculptured.

(Illustrated on following page)  
(Degener & Degener, Date to come) (Aided by National Science Foundation)

DR. OTTO DEGENER  
DR. ISA DEGENER  
68617 CROZIER DRIVE

NO.

59-126  
1213

WAIALUA, HAWAII

PAY TO THE  
ORDER OF

*Paradise of the Pacific*

*Jan 4 1958*  
\$ *896 <sup>93</sup>/<sub>100</sub>*

*Eight hundred and ninety six and <sup>93</sup>/<sub>100</sub>*

DOLLARS

WAIALUA BRANCH  
BISHOP NATIONAL BANK  
OF HAWAII

*O. De Degener*



68617 Crozier Drive, Waiialua, O O 1,  
Hawaii, Jan. 11, 1958.

Mr. Henry de la Montagne,  
N.Y. Botanical Garden,  
Bronx Park, N.Y. City.

Dear Mr. Montagne:

Here is a copy of Book 5, the book at whose slow birth you so kindly helped us. This particular copy is not trimmed, the regular ones on hand having run out temporarily. Here you can see what the cover is like. We purchased, as you know, only 2,000 covers to save cash even though the edition is 3,000. When the 2,000 have been used up (and if we should have a renewal of NSF funds) perhaps we can afford to order the remaining 1,000.

Below is our accounting for the last six months ending Dec. 31, 1958:

Printing (Paradise) - - - - -	\$ 568.70
2,000 Book Covers	1,530.00
Car	116.83
Island of Lanai trip	232.67
Red Purse (mainly postage on books, money orders for miscel drawings <u>not</u> by Wimmer, plant packages; express, phone)	399.68
Wimmer Lobelia drawings	<u>\$ 2/ 57.10</u>
	\$ 2,904.98
On hand July 1, 1957	\$ 1,420.24
Received from NSF July 30, 1957	2,000.00
Total	<u>\$ 3,420.24</u>
Expenses for six months ending Dec. 31, 1957	<u>2,904.98</u>
Balance Jan. 1, 1958	\$ 515.26

Since Jan. 1, 1958 we spent the following large sum:

Paradise of Pacific printing - - - - - \$ 896.93\*

\*Note that I was billed \$44.50, 36.42 and 44.50 respectively for three sheets (labeled 97, 215 and 97). I paid these items under protest, waiting for Mr. Sjootman's, the manager's, return from a visit to California. These three packages got lost or destroyed over the years and so I had them printed, not from linotype, but by the cheaper (?) photo-Offset process. I do not understand why each sheet should not be \$36.42 as it costs no more to photograph and run off a page with much print on it as a page with only a little.

In a later accounting I shall have another photo-offset bill, from the Honolulu Advertiser Co., this time. It will show whether Paradise is overcharging me or not. Many months later I may be forced to offset sheets of Plumeria (you know the plant as frangipani if you have toured the tropics). My 11 inch high package somehow got wet at one end. As we assemble books and the good sheets give out, I must print the missing ones. By the way, we are suffering horribly drudgery. It takes 20-25 minutes to assemble a single book, and we have 3,000 to attend to! This work takes so much time from research. I wish I could hire some schoolboy but here again it means paying him from all-too scant funds.

We are having two tires retreaded and really must have the car painted. It is rusting badly. Outdoors does not agree with it. These items, however, do not concern us now.

Please mail us the remaining NSF funds now at the Garden, and the additional \$1,200 payable by NSF soon after you get them March 15.



HAWAIIAN PINEAPPLE COMPANY  
LIMITED

*Lanai City, Lanai, I. H., U.S.A.*

January 10, 1958

Dr. Otto Degener  
Waialua, Oahu, T. H.

Dear Dr. Degener:

I want to thank you very much for sending me Book 5  
of *Flora Hawiienensis*. This I will put beside my volume of  
Books 1 - 4.

I also want to thank you for sending me the extra  
sheets and the sheet on *Furcraea Foetida*.

We enjoyed Mrs. Degener's and your visit very much,  
and am glad of your interest in Lanai.

With kind personal regards,

Sincerely,

W. W. Aldrich

WWA:sp



THE NEW YORK BOTANICAL GARDEN  
BRONX PARK  
NEW YORK 58, N. Y.

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January 21, 1958

Mr. Otto Degener  
68617 Crozier Drive  
Waialua, Oahu  
Hawaii

Dear Otto:

Thank you for your postal telling us that you will be off to Canton Atoll on January 30. Have a fine trip and get some interesting plants!

When you return, give some thought to the drawing up of your NSF renewal application. I do hope I won't have to prepare this for you, as my time is now so consumed by Garden work.

Had you heard that Dr. William C. Steere has been selected as our new director and will come in mid-July? In the mean time, you can see my title but I continue to carry on the work of head curator, and for another week or so that of curator of the cryptogamic herbarium. We have not had anyone there since September, when Don went to Illinois; but we have a good man coming to us from Kansas State College, Dr. Clark Rogerson.

Our very best to you both!

Sincerely yours,

*David*

David D. Keck  
Acting Director

DDK:hw

NATIONAL SCIENCE FOUNDATION  
WASHINGTON 25, D. C.

January 24, 1958

Dr. Otto Degener  
68617 Crozier Drive, Waialua  
Oahu, Hawaii

Dear Otto:

We have recently received in good condition the shipment mentioned in your letter of January 4 consisting of six copies each of your volume 5 and the first fascicle of volume 6. You and Mrs. Degener are certainly to be congratulated upon the appearance of volume 5, which will greatly increase the value of your total work to date.

The official number of your grant is G-2216 and this is the number that should be used whenever the grant is mentioned. B-1819 was only a temporary number applied to the proposal while it was under consideration. I hope that sufficient funds remain in the grant to permit you to accomplish additional field work this summer.

I note that the terminal date of this grant is January 1959. Of course we should be glad to receive a new proposal, and I suggest that you discuss the matter with Dr. Steere and Dr. Keck who will doubtless be glad to continue the cooperation of the New York Botanical Garden in submitting a proposal. Since you ought to allow us five or six months to consider a proposal, I suggest that you aim for our deadlines of May 15 or September 15.

The National Science Foundation is very much pleased to have made possible the publication of volume 5. I see no reason why you should send this volume gratis to many individuals or institutions. In fact, I think it should be priced like volumes 1 to 4, in which case any income from sales with the permission of the New York Botanical Garden could be put into a fund for the publication of future volumes. The recent list of the membership of the IAPT published in *Taxon* will serve to give you an idea of some individuals and institutions who would be interested in receiving volume 5.

With best wishes for the continuing success of your work,

Cordially yours,



A. C. Smith  
Program Director  
for Systematic Biology

# THE NEW YORK BOTANICAL GARDEN STATEMENT OF ACCOUNT

INVOICE DATE

AMOUNT OF INVOICE

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1/23/58

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314

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DETACH THIS STATEMENT BEFORE DEPOSITING CHECK

MIT FLUGPOST  
PAR AVION



Mr. Dr. Otto Degener

68617 Crozier Drive

Waiialua, Oahu

Territ. Hawaii U.S.A.

*Go CAA Canton Island  
Phoenix Islands  
South Pacific*

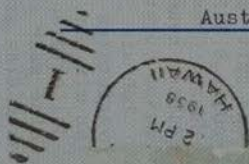
AEROGRAMM  
AÉROGRAMME  
AIR LETTER

NICHTS EINSCHLIESSEN. SONST KEINE BEHANDLUNG ALS AEROGRAMM

ABSENDER: Prof. F.E. Wimmer

Wien XV. Holochoerg.2

Austria

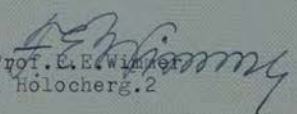




Wien 31. Jänner 1958

Quittung

Bestige den Empfang von S 60- (sechzig) für Zeichnungen für die Flora Hawiliensis von Dr. Otto Degener.

  
Prof. F.E. Wimmer  
Wien XV. Hölzchg. 2

Lieber Herr Dr. Degener !

Die Zeichnungen - 11 an der Zahl, um eine mehr, weil der Zeichner aus Versehen zuerst die *Clermontia kohalae* var. *hiloensis* E.W. gezeichnet hat, obwohl ich ihm die *Cl. kohalae typica* aufgeschrieben hatte - und weil sie schon einmal gezeichnet war, so schicke ich sie mit, vielleicht reizt es Sie, auch diese Varietät, die schon fast einer species gleicht, auch zu drucken, also diese 11 Zeichnungen habe ich Ihnen rekommand. vor zwei Tagen schicken lassen. Hoffentlich kommen sie unverseht in Ihre Hände.

Für die 60 Dollar erhalten Sie wieder 10 Zeichnungen; ich werde jene *Cyanea* aussuchen, die noch nirgends abgebildet worden sind und von denen wir gutes Material hier haben. Da der Zeichner nicht genügend geübt ist, direkt von der gepreßten Pflanze die Zeichnung anzufertigen, so mache ich ihm vorher eine genaue Skizze, damit er darnach ein treues Bild zeichnen kann. Trotzdem muß ich nicht selten ihn nachträglich manches noch korrigieren lassen. Von *Cl. wailauensis* erhalte von N.York ein gutes Exemplar. Werde dann noch diese zeichnen lassen.

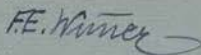
Rock hat mir kürzlich geschrieben, daß er wieder in Hawaii ist und dort botanisiert. Seine neue *Cyanea carlsonii* ist für mich solange eine species dubia, als von ihr keine Blüten vorhanden sind. Ebenso *Cyanea mceldownei*. Ich hoffe, daß ich die Exsikkaten von diesen neuen Arten vom Bishop Museum erhalte und welche Sie dann davon abgebildet wünschen, müssen Sie mir bald mitteilen.

Ich bin jetzt gerade dabei, die Reinschrift der neuen Arten und Varietäten für das Supplement zum Pflanzenreich zu machen. Wenn es mir mit der Zeit ausgeht, möchte ich auch ein Verzeichnis aller Kollektoren von Lobeliaceen anfertigen und beifügen. Es ist das eine sehr zeitraubende und ermüdende Arbeit, aber für das Bestimmen eine große Erleichterung. Wahrscheinlich müßten auch manche Bestimmungsschlüssel neu gemacht werden, wenn viele neue Arten einer Gattung dazugekommen sind.

Senden Sie mir vielleicht die Zeichnung einer neuen *Rollandia*-varietät, möglicherweise finde ich hier die betreffende Pflanze.

Wünsche Ihnen auf Canton Atolle gute Ausbeute und grüße Sie und Ihre Frau Gemahlin

Ihr



68617 Crozier Drive, Waiialae,  
Oahu, Hawaii.

Jan 7 1958

Dr. William C. Steere,  
N.Y. Botanical Garden,  
Bronx Park, New York City.

Dear Dr. Steere:

I herewith submit my annual report for 1957: Due to the kind offices of the Garden, the National Science Foundation furnished the grant-in-aid (No. B-1819) "for the support of research entitled 'Botanical Exploration of Hawaiian Islands,' under the direction of Otto Degener, Collaborator in Hawaiian Botany." This help during the past year enabled my wife, Dr. Isa Degener, and me to botanize for two weeks on the little-known island of Lanai and to publish 144 pages in,

Degener, Otto, Flora Hawaiiensis or New Illustrated Flora of the Hawaiian Islands.

My careful estimate of the desired funds (without any "padding") submitted to the National Science Foundation was not allowed in full. Hence Mrs. Degener and I were glad to adjust our activities within the framework of the \$12,000 kindly made available. We reduced planned exploration and, for example, had one book cover do the efficient duty for 446 pages instead of about 350.

It may seem strange that I had written Dr. Rogers McVaugh that we intended botanizing extensively on Kauai and then spent but a scant two weeks on Lanai. The reason was that a part-Hawaiian resident of Lanai, Mrs. Eileen Desha, defrayed much of our expenses on her island. We had no such attractive offer from any resident of Kauai.

With the above annual report, I may as well write you about our coming need for aid rather than bother you anew with a separate letter:

Having about depleted the \$12,000 NSF grant and having completed Book 5, may I request that you kindly have the Garden sponsor my application during the next three or so months for a second National Science Foundation grant? I believe it should be for at least \$25,000 to enable efficient collecting and recording of the existing native and introduced flora. I am convinced we should not be limited in field activity to any one island but be allowed to go freely to wherever the greatest opportunity happens to arise. I would be most grateful for any advice you can give me in regard to this project, advice that your past experience with the NSF makes most valuable.

The two bound volumes now before you show the type of Flora we are publishing with aid of NSF funds. Due to natural and human causes the first edition of Books 1 - 4 is now out of print. The second edition, printed during the War on inferior paper stock, I have intercalated with sheets of Book 5, printed on regular 70 lb., filled paper. You will notice the difference at a glance.

A New Yorker, I have visited the Garden repeatedly since a babe in arms. In 1922 I began my botanizing in the Hawaiian Islands with the express purpose of publishing an up-to-date Flora. The original set of my collecting has always gone to the Garden as I retain no herbarium of my own. I have never received nor asked for financial aid from the Garden (realizing that the Garden makes good use of its own appropriations) excepting for my botanizing in 1940 - 41 in the Fiji Islands. As in the past I do not ask for financial aid from the Garden but merely for aid to win a grant from the National Science Foundation. With such a grant we should be able to



FLORA HAWAIIENSIS

Family: 344  
Genus: *Lipochaeta*  
Species: *Lavarum*,

COMPOSITAE  
COMPOSITE FAMILY

**LIPOCHAETA LAVARUM** (Gaud.) DC.  
GAUDICHAUD LIPOCHAETA; NEHE

- Verbesina lavarum* Gaud. Voy. Freyc. Bot. 464. 1829.  
*Lipochaeta lavarum* DC. Prodr. 5 : 611. 1836.  
*Michrochaeta* ? *lavarum* Nutt. in Trans. Am. Phil. Soc. N. S. 7 : 451.  
1841.  
*Michrochaeta cavarum* (sphalm) Nutt.: Walpers Repert. 2 : 620.  
1843.  
*Lipochaeta lahainae* Wawra in Flora 56 : 77. 1873.  
*Lipochaeta lavarum* sensu Sherff in Bull. B. P. Bishop Mus. 135 : 55.  
1935. (Excluding Lanai plants.)  
*Lipochaeta lavarum* sensu Sherff in Field Mus. Nat. Hist. Bot. Ser.  
17 : 581. 1939.  
*Lipochaeta lavarum* var. *typica* Sherff in Brittonia 6 : 338. 1948.

Erect suffrutescent 3-5 dm. tall much branched perennial with erect rigid strigose-canescens foliose branches having internodes sometimes only 3-7 mm. long. Leaves suberect, 25-80 mm. long and 6-12 or rarely up to 19 mm. wide, elliptic-lanceolate or narrowly oblong to rhombic-elliptic, at apex acuminate to acute or rarely obtuse, at base gradually narrowed into up to 10 mm. long petiole, serrate or crenate to subentire, canescent, thickish, strongly 3-nerved. Heads simply cymose with slender pedicels strigose-canescens and 20-50 mm. long, at anthesis 18-30 mm. wide and about 5-7 mm. tall. Involucre canescent; exterior bracts about 4 or 5, rigid, coriaceous, ovate to ovate-oblong to suborbicular, obtuse, shorter than disk. Ray florets 7-12, usually 6-13 mm. long, the ligule linear-oblong and apically tridentate. Exterior achenes 3- or 4-angled, suborbicular in outline, thick, brownish, moderately verrucose, often alate upon the angles, the body 3-3.5 mm. long and at apex fimbriate-setose and irregularly aristate; interior achenes more glabrous, more obcompressed, on faces usually black, on wings and fimbriae of apex more or less stramineous, few-aristate with aristae antorsely spinulose-denticulate and 1-2 mm. long.

Type Locality: Hawaiian Islands.

Local Range: Known from Hawaii, Maui, Molokini and Molokai, most collectors unfortunately seldom citing the precise locality of their finds. On Hawaii it was collected along an arid, grassy, precipitous ravine mauka of Kawaihae in 1929 by Degener. It had been collected somewhere on the same island years before by Hillebrand. On Maui it has been found quite often by various botanists at lower elevations on the arid, *pili* covered, rocky slopes from about Maalaea to about Olowalu and perhaps beyond; and once at Kamana, south slope of Haleakala, by Forbes in 1920. On Molokini it was collected by Forbes and companions in 1913; on Molokai, by Rock in 1910.

Extra Range: Species and varieties endemic to the Hawaiian Islands. This *nehe* is far less characteristic of lava fields than many other species, and hence Gaudichaud's name is an unfortunate one. Because the areas inhabited by the species proper and by some of its varieties overlap, we may suspect that more thorough collecting — provided cattle have not laid waste the plants' habitats before that time — may prove some of the presently accepted entities to be merely variants of a polymorphic species, and may also unearth additional new varieties.

(Illustrated on following page)

(Dim 12/27/57) (Aud)

THE NEW YORK BOTANICAL GARDEN  
BRONX PARK  
NEW YORK 58, N. Y.

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DIRECTOR  
WILLIAM J. ROBBINS

February 3, 1958

Mr. Otto Degener  
68617 Crozier Drive  
Waialua, Oahu, T. H.

Dear Otto,

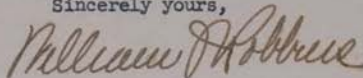
I am writing to express my appreciation to you and to Isa for Book 5 of Flora Hawaiiensis and especially for the inscription which includes an invitation to enjoy your guest house. I wish it were possible for us to take advantage of it.

How nearly complete is the Flora? It is nice to see as substantial a contribution justifying the grant of the National Science Foundation.

One of my assistants, Miss Mary Stebbins, is planning to be in Hawaii soon, if she has not already arrived. I don't know how long she expects to stay but I think you and Isa would find her worth knowing.

Mrs. Robbins joins me in kindest regards to you both.

Sincerely yours,



WILLIAM J. ROBBINS

wjr/bw

Answered # 2/12/58

THE NEW YORK BOTANICAL GARDEN  
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ACTING DIRECTOR  
DAVID D. KECK

February 4, 1958

Mr. Otto Degener  
68617 Crozier Drive  
Waiialua, Oahu, Hawaii

Dear Mr. Degener:

I have your letter of January 11th and want to thank you most sincerely for the book and particularly for the nice inscription on the title sheet. This will be a very fitting memento of my extremely modest contribution to the Hawaiian flora. It was good of you also to mention my name in the introduction, which wasn't necessary at all but was most certainly thoughtful of you and very much appreciated by me.

The accounting for the six months period which you included in your letter has been noted and will be used in due course when we account to the NSF. I have noted your request that we remit to you the balance on hand in the fund. On checking our accounts I find this amounts to \$916. I find the check has been mailed to you already although I intended to enclose it with this letter. Please let me know if you do not get it.

With kind regards.

Sincerely yours,



H. de la Montagne  
Secretary

HM/gd

*Regret to say I have just come from the funeral  
of Prof. Sam Hillebrand of Columbia & a member of our  
Board. Presume you knew him.*

INVOICE DATE

AMOUNT OF INVOICE

AMOUNT

ACCOUNT NO.

3/19/58

8

\$ 1,160.50

\$ 1,160.50

314

ENTERED CASH BOOK.

APPROVED FOR PAYMENT

DETACH THIS STATEMENT BEFORE DEPOSITING CHECK

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DAVID D. KECK

March 19, 1958

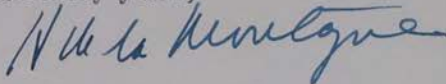
Mr. Otto Degener  
68617 Crozier Drive  
Waialua, Oahu, Hawaii

Dear Mr. Degener:

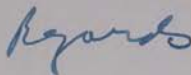
We have just received a further check from the Federal Government in the amount of \$1,200.00, being the amount due March 15th as provided in the terms of the grant to you for botanical exploration of the Hawaiian Islands. In the meantime we have just paid a bill for \$39.50 covering the renewal of the insurance on your automobile. The difference, therefore, in the amount of \$1,160.50 is enclosed herewith. I assume you will account for this money in the usual way and also for the last check that was sent to you (\$916.00).

I also enclose a copy of the Employers' Liability Assurance Corporation policy in renewal of your automobile insurance, together with an identification card.

Sincerely yours,



H. de la Montagne  
Secretary



HM/gd



Waielua, Oahu, Hawaii.  
March 20, 1958.

Dr David D. Keck,  
N.Y. Botanical Garden,  
Bronx Park, N.Y. City.

Dear Dave:

I have your Jan. 21 letter before me.

Here is the appeal for another grant-in-aid from the NSF. Please read it - I doubt you have time to wade through all of it - and instruct me what to do next. Should I forward eight copies, with an official explanatory letter from you, to N.S.F.? Or shall I mail you the eight copies from here, and you forward them from New York to Washington with your letter? I need some little time to type eight copies (perhaps with one or two carbons).

I include the lengthy bibliography because I am essentially a field botanist and my forte is my accumulation of plants now in the hands of monographers; hardly are my more or less popular publications very impressive. McVaugh, now no longer with NSF, questioned two years ago my getting the past grant until I sent such a lengthy bibliography to him. That seemed to clinch my argument that I deserved a grant.

With a little more printing and botanizing I shall be at the end of my financial rope.

Canton Atoll was as usual fascinating. We collected some Algae; nothing in the Higher Plants, hardly. Papenfuss just wrote he had no time to work up our catch. He advised our asking Dr. E.Y. Dawson. I shall do so tomorrow.

Aloha,



1616 east 50th place, Chicago 15  
22 March 1958

Dear Dr. Segeen:

Your letters from Canton island and your more recent ones, together with four cans of algal specimens, arrived at a rather inopportune time - as far as my tending to correspondence was concerned - and I shall have to beg your pardon for being so late. I am delighted and grateful for your interest in doing so careful collecting in the Phoenix islands and am looking forward to looking at the material carefully in a few weeks.

The past few months have been rather a madhouse in the museum here, and though I have plenty of work to be occupied with, the happenings in the botany department here concern most two of us on legs; and I'm afraid that a good deal of time has had to be spent in things personal rather than botanical. In December, Mr. Sells, curator of botanical exhibits, entered the hospital with a complete nervous collapse after a considerable period of underhanded dealings by the present head of the department. Now he is out, but it is doubtful whether or not he will stay with us long. Then at the end of January, Dr. Steyermark was ordered to resign and move all his belongings out of the museum within eight days. Mr. Tust has been hunting for and manufacturing pretexts to get rid of him for a year and ~~at~~ half now, and the pretext that "got" him was of the most scurrilous sort, completely unfounded, which only the naive Steyermark of all the people in this world would believe in without trying to defend himself. Now only Dr. Dahlgren (who is now 81 and recovering from a serious operation in August) and I are alone in the place. Of course, these people will not be replaced, I learn, any more than the 8 others of the staff before them who were maneuvered out. Perhaps the reason is that since Tust (the head for 10 years now) was fired at Notre Dame when the staff there rose up against him and then was brought to us by the late sainted Karl Schmidt in spite of our protests, Tust is inflicting against a repetition of his former fate by reducing the staff here to nothing. For me the past 10 years have been one intrigue after another which might have resulted in my being fired, but so far none has worked. Sometimes I feel that life would begin again if I did get out. I think that Steyermark will find a new place soon.

We are hoping that things here will be calm for awhile now, but there

is no assurance of this.

Thanks again for all your efforts and for the specimens. I'll be able to report to you in a few weeks about the merits of your method of preservation of the algae.

With all best regards and wishes,

Sincerely,

Francis Jones

WAIALUA BRANCH

WAIALUA, HAWAII

58-117  
1213

**BANK OF  
HAWAII**

PAY TO THE  
ORDER OF

DR. OTTO DEGENER or  
DR. ISA DEGENER  
68-617 Crozier Drive  
Waiolua, Hawaii

*March 26, 1958*  
*Mr. J. W. Black* \$ *10* <sup>*00*</sup>/<sub>*100*</sub>  
*and no* DOLLARS  
*Dr. Otto Degener*

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ACTING DIRECTOR  
DAVID D. KECK

March 28, 1958

Mr. Otto Degener  
68617 Crozier Drive  
Waialua, Oahu, Hawaii

Dear Mr. Degener:

The NSF has requested us to make an accounting of your expenditures inasmuch as we have not done so from the origin of the grant to date. I have carefully kept your various bills and records and have compiled an accounting to December 31, 1957 covering monies received from the Foundation to that date, amounting to \$9,000. The expenditures shown for that period amount to \$8489.04, leaving a balance supposedly in your hands of \$510.96. I realize that you reported a balance in your hands at the close of that period of \$515.26. We have found a little mistake in addition on two of the statements you rendered which accounts for the difference. We are taking my figures because the Foundation will no doubt send an accountant who will check into this and want explanations.

*entire accounting*  
For your information, I am sending you a copy of the summary of your expenditures which we have compiled. What I am leading up to, however, is one discrepancy which I am unable to explain, and maybe you can help us out or get a bill. In the period from January 1, 1957 to June 30, 1957 you reported a printing expenditure of \$1,375.11. The bill we seem to have covering this period, dated February 21, 1957, amounts to \$623.12, leaving a difference of \$751.99. Have you another bill for that amount or can you explain this difference? Please understand I am not questioning you; I am only asking for information so that we can be intelligent in dealing with the NSF.

You may wonder about the bills we paid for the car insurance. I realize that some of these were paid in the period in question, but we neglected to deduct them from the remittances for that period, but we did deduct them from the two remittances made this year to you, viz. \$916. and \$1,160.50. We deducted \$83.51 from one and \$39.50 from the other, so we actually owe you 49¢, which will all be washed out when we make a final remittance to you.

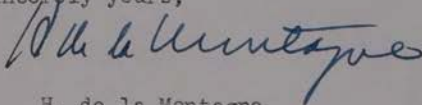


3/23/52

While writing to you I thought you might be interested to know that this morning we had returned to us loose-leaf sheets of your book 5 of Flora Hawaiiensis which you had addressed to Professor Kimura, Imperial University, Kyoto, Japan. The envelope is marked "Retour inconnu", which I presume means "return to sender." Otherwise I don't know why it was returned to us. You did have your name and address in the corner of the wrapper.

I trust all goes well with you and with best regards,

Sincerely yours,



H. de la Montagne  
Secretary

P. S. Will you let me know right away if you have any comments as these reports should go into the Foundation fairly promptly. Of course the accounting will not go in in the form submitted to you herewith, but will be allocated to various headings required by the Foundation, such as Permanent equipment, Supplies, materials, expendable material, travel costs, publication costs, which we can fill in from the data we have.

HM/gd



312853 #1

Expenditures Supported by Bills

2/27/56	Used Volkswagen	\$1,537.50
3/1	J. G. Dowson - car agent	50.00
3/10	Painting, etc. Volkswagen	39.00
3/13	Paradise - printing	698.20
3/26	Corrugates and postage	68.33
7/5	Coleman Lantern	30.51
5/14	Two months' rent for cottage	50.00
6/7	Paradise - printing	378.16
8/28	Paradise - printing	376.87
11/1	Paradise - printing	321.63
2/21/57	Paradise - printing	623.12
6/27	Hawaii Library Binding -- 2000 loose- leaf binders.. Paid on account	1,500.00
8/28/	Hawaii Library Binding - Bal. due	30.00
8/13	Paradise - printing	568.70
8/3	Mrs. Edean Desha - Housing & jeep	100.00
8/1/	Hawaiian Airlines	1.67
	" "	3.59
	" "	4.22
	" "	4.82
	" "	4.82
	" "	9.63
	" "	9.63
1/2/58	Wimmer - Drawings	57.10
		\$ 6,467.50

Expenditures Unsupported by Bills

3/10/56	Volkswagen - painting, repairs, etc. Difference between amount on accounting and bill	78.21	
3/26	Metal corrugates, lantern, straps, kerosene, etc. Difference between amount on accounting and bill	25.69	(Drawings, car- fare, postage
	Miscellaneous - to Oct. 1, 1956	149.80	
	Miscellaneous - to Dec. 31, 1956	33.42	
	Transportation and car upkeep-to 12/31/56	99.37	(Drawings, plant press, postage, equipment
<u>Jan. 1 - June 30, 1957</u>			
	Printing - Difference between bill and accounting	751.99	
	Car	108.00	
	Major Drawings	45.26	
	Miscellaneous- Ins. not including that bought thru Garden, postage, minor drawings, etc.	119.00	
<u>July 1, 1957 - Dec. 31, 1957</u>			
	Island of Lanai trip-Difference between accounting and bills	94.29	
	Car	116.83	
	Miscellaneous (postage, money orders for misc. drawings, plant packages, etc.)	399.68	
		\$ 2,021.54	# 2489.04

4910 Dorset Ave.  
Chevy Chase 15, Md.  
March 29, 1958

Dear Otto and Isa,

I should have written earlier to thank you for being so nice to my sisters. They certainly enjoyed meeting you and were very appreciative of all your hospitality, the use of your house, etc. We have had cards and notes from them on Kauai, Hawaii, and Maui, and so it seems that they are seeing quite a lot of your islands. Now I guess they will have a couple of weeks again in Honolulu before starting home.

That was quite a storm described in Otto's letter of Feb. 28. Never a dull moment. I hope things got dried out again without much damage. Anyway it wasn't snow. The Honolulu papers have doubtless made the most of the east coast winter, and they needn't have exaggerated much. In the past month we have had two wet snows that crippled Washington, 8 - 14 inches each. However, the storm last week centered in Pennsylvania, with snows there up to 48 inches.

We have just had our spring panel meetings at NSF and are now clearing the decks for a June meeting. At the last one there were nearly 90 proposals in systematic biology, so you can see that business is booming. The situation for our fiscal 1959 budget looks quite favorable, and we are hoping next year to be able to support about 40 percent of the research demand, instead of 30 percent or less as in the past. By the end of this fiscal year (June), we will have received more than 200 requests, and maybe about half of them can result in grants.

I hope your trips will bring you both east sometime soon. This summer I am planning to attend the Zoological Congress in London, but won't take the time for a long trip. The Botanical Congress at Montreal in 1959 may attract you this way.

Regards to both,

al

Ala. Inst. Bot.  
April 1, 1957.

Dear Mr. Montagne:

I have your March 28 letter and hasten to answer it, I hope correctly, even though it is April 1.

Can it be that some of my letters got lost in the mails with receipted bills, each in excess of \$25? Luckily for the bigger printing bills I always insisted on copies.

You state "The bill we seem to have covering this period, dated Feb. 21, 1957, amounts to \$623.12, leaving a difference of \$751.99." This sum is explained by a copy of my May 8, 1957 letter to you which included the bill of April 23, 1957 of \$718.87. Then Aug. 13, 1957 I had a printing bill of \$601.82 but on it was a credit balance of \$33.12 because of an overcharge in April on poor workmanship. So 718.87 plus 33.12 gives \$751.99, the sum in question.

I bought the Coleman Lanterns from the Tanabe Furniture Store and, as the sum exceeded \$25, I believe I mailed the receipted bill to you of \$30.51. If you cannot find it then I can go to the store and have Tanabe hunt up the copy. At any rate, I have the lanterns, practically new, here at the beach in their original boxes.

In your letter you have figures under the heading "Regarding Expenditures Unsupported by Bills to the Sum of \$2,021.54."

From the above we must subtract the sum of \$751.99 which is accounted for in the third paragraph and supported by the 2 accompanying bills and \$751.99 cancelled cheque. That leaves about \$1,270 unaccounted for. This sum is absorbed by purchases or services amounting to less than \$25 for which, following your instructions, we sent you no receipted bills. In fact, for many of such minor items we simply got no receipts. Nevertheless, in going through our papers for the NSF project, we find the mess of small receipted bills at hand adds up to around \$600. If you wish we can mail them to you before the NSF accountants come.

I guess our letters crossed in the mails - some high receipted bills should be in your hands toward the end of this month, new ones.

We hope the snow storm did not nip the Spring flowers seriously at the Garden.

Aloha,

NEW ILLUSTRATED FLORA OF THE HAWAIIAN ISLANDS

Family: 190  
Genus: Aleurites  
Species: Remyi

**EUPHORBIACEAE**  
SPURGE FAMILY

**ALEURITES REMYI** Sherff

(Original)  
(Described on prec)

24



THE NEW YORK BOTANICAL GARDEN

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DAVID D. KECK

April 2, 1958

Mr. Otto Degener  
68617 Crozier Drive  
Waialua, Oahu, Hawaii

Dear Otto:

I am replying to your letter of March 20th and the research proposal for NSF. I suspect you have a copy of the guide rules for drawing up a NSF research proposal. Twenty copies must be submitted and, of course, the best way to do that is by mimeographing.

I have read your proposal and am struck by the following points:

You have not made your best case for the use of the present research grant. People who are asked to pass on the new proposal will give consideration to the results obtained from the first one. Can you indicate what field work has been done, how many islands visited, and what critical areas have been collected on the present grant? Can you be more specific as to the publication accomplished? The grant was not given you just to provide a car for your use on Oahu nor to publish manuscript already on hand, yet on first glance one is apt to get the impression that these are principal results.

You may need another chapter outlining accomplishments to date which would precede your "Description of Proposed Research. I think you should not stress the multiplication of species going on by some contemporary botanists. Many of us in this part of the world are skeptical about the species situation in such a genus as Cyrtandra, for example, where St. John would have 600-1000 species for the Islands. Fosberg commented on this the other day. We would think that a total Hawaiian flora of 25,000 to 30,000 species (your letter to Dr. Robbins of February 12) based on taxonomy of this kind, might not stand up over the long run when more accurate criteria of species are applied. You point out that you have thus far described 500 to 600 species in the Flora, which would mean that we would have to look forward to fifty times as much more publication from you in order to complete the job. I can assure you the NSF would not be interested in giving further support to your work if it felt that the job were actually that large!



4/12/58

So don't include such figures in your proposal.

It is customary for the institution of the principal investigator to receive 15% of the total amount of the grant as overhead to take care of facilities provided. We received no overhead from your last grant, although several of us have been involved from time to time on the bookkeeping, etc. I think it would be appropriate on the new grant to put in a 10% overhead charge which would recompense us for business office services, etc. on both grants.

The budget should be broken down by years, I think, for the panel is quite critical of the budgets that are submitted and it is quick to see items that appear to be out of line. I suggest that the budget be submitted along lines similar to those shown on the enclosed sheet. Change things around as you want to, but I think you are allowed only seven cents a mile for an automobile. Upkeep on your car cannot be charged to NSF but mileage for field work can, and I would make the item "Expendable Equipment" smaller than you have shown unless you have additional justifiable items of significant cost to mention. As to publication, you ask for 100 illustrations costing some part of \$5,000. This made them horribly expensive and I have presented the data in another way.

The deadline for receipt of proposals in Washington is May 15th, but I suggest you make every effort to get it there by May 1st. Copies should be signed by you and by us so the proposals might as well be sent to Washington from here.

I am returning your original proposal but holding the eight newspaper clippings. If you can get seven more they would be useful as I would attach the fifteen to the copies of the proposals submitted to Washington.

If you have any further questions ask me about them.

With kindest regards.

Cordially yours,



David D. Keck  
Acting Director

DDK/gd

NATIONAL SCIENCE FOUNDATION

GRANT FISCAL REPORT

THE NEW YORK BOTANICAL GARDEN (Dr. Otto Degener, Principal Investigator)

From: Bronx Park, New York (Grantee).

(Address)

April 4, 1958

To: Chief Grants Administrator  
NATIONAL SCIENCE FOUNDATION  
Washington 25, D. C.

Date: \_\_\_\_\_

G 2216

Report of obligations from NSF funds for grant number: \_\_\_\_\_

Feb. 1, 1956

Dec. 31, 1957

Reporting period: \_\_\_\_\_ to \_\_\_\_\_ (NSF No.)  
(Date) (Date) (inclusive)

Type report: Interim ☐, Number \_\_\_\_\_; final ☐ (check one)

	<u>Item</u>	<u>Amount Expended</u>
1.	Salaries and wages .....	\$ 1,784.45
2.	Equipment (permanent) .....	627.08
3.	Supplies, materials, and expendable equipment .....	6,077.51
4.	Travel .....	_____
5.	Publication costs (Total - page costs, reprints, direct labor, etc.) .....	_____
	(a) Page costs only, if available .....	_____
	(b) Reprints, direct labor, and any other publication costs .....	_____
6.	Other (specify): .....	8,489.04
		00.00
7.	Total direct costs - Add lines 1 through 6 .....	8,489.04
8.	Allowance for indirect costs - _____ % of line 7 .....	_____
9.	Total obligations for above period - Add lines 7 & 8 .....	_____
10.	Total obligations for prior periods .....	_____
11.	Total obligations to date - Add lines 9 & 10 .....	_____

COMMENTS: (Continue on reverse side if necessary)

The New York Botanical Garden

SIGNED: \_\_\_\_\_ TITLE: Secretary

TYPE NAME: H. de la Montagne

Two copies of an interim fiscal report are due approximately six months from award date of a grant and at six-month intervals thereafter. Firm outstanding commitments should be considered as obligations for the purposes of interim reports. Two copies of a final fiscal report are due as soon as possible after all costs chargeable to the grant are known. The following certification, in the case of final reports, should be inserted above, immediately preceding the signature of the official authorized to sign for the grantee institution: "I certify that this final fiscal report is correct and that the expenditures included herein are deemed properly chargeable to the grant." Unused funds are to be returned by check payable to the National Science Foundation.



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TO

Dr. Otto Degener  
Waialua, Oahu

DATE April 4, 1958

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QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT	TOTAL
19	lots Flora Hawaiiensis			518.36
	Family 68: Dracaena.....	28.45		
	" 167: Eriobotrya.....	32.87		
	" 344: Railliardia.....	34.30		
	" 344: Railliardia.....	33.59		
	" 344: Dubautia.....	38.87		
	" 344: Dubautia.....	38.87		
	" 344: Lipochaeta.....	28.95		
	" 344: Lipochaeta.....	33.12		
	" 344: Lipochaeta.....	20.70		
	" 293: Mimusops.....	20.70		
	" 293: Mimusops.....	33.81		
	" 48: Carex.....	36.81		
	" 273: Eugenia.....	30.90		
	" 344: Railliardia.....	35.38		
	" 344: Railliardia.....	35.38		
	" 48: Carex.....	35.66		
	Less credit on December billing.....			16.16
	<b>DUPLICATE</b>			502.20

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THE NEW YORK BOTANICAL GARDEN  
BRONX PARK  
NEW YORK 58, N. Y.

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ACTING DIRECTOR  
DAVID D. KECK

April 4, 1958

Dr. Otto Degener  
68617 Crozier Drive  
Waialua, Oahu, Hawaii

Dear Dr. Degener:

I see that I should have been calling you "Doctor" for which I make due amends, but I think hereafter I'll just say "Otto," as I think I have known you for at least twenty-five years.

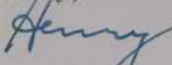
Thank you for your letter of April 1st in regard to the accounting figures. This has cleared the matter up very nicely, as we never did receive your letter of May 8th, a copy of which you just sent to me. We have translated the figures into the form required by the Foundation and are sending the report in today, which I am sure should be acceptable to them. A copy of this is enclosed herewith.

I see in the printed rules covering these grants-in-aid that an informal annual report should be submitted prior to a more comprehensive report at the expiration of the grant. I do not know whether you should do this or not or whether we should wait until they dun us for it. The grant will terminate supposedly next January and maybe we can stretch this out into one final report at the end of the grant period.

Spring has finally arrived and the recent severe storms are quite forgotten in the pleasant sunshine we are today enjoying. No serious damage was done in this area although down in Maryland there was quite extensive damage.

With best regards to you and Mrs. Degener.

Sincerely,

  
H. de la Montagne  
Secretary

HM/gd



Mokuleia Beach, Waiialua,  
Oahu, Hawaii.  
April 7, 1956.

Dear Dave:

Your April 2 letter, just received, must have crossed mine of April 1 to Mr. Montagne in the mails. I fear you are much too over-anxious about the NSF grant not being renewed. We have done the best we could for the past grant and are doing the best we can for a possible renewal. The decision is in the lap of the gods and up to Washington. If we fail in a renewal I certainly won't blame you, nor myself either for that matter. I would simply send the very same application to the Guggenheims or elsewhere. I have studied publications resulting from NSF and other grants, and find my own results from an outlay of \$12,000 not unfavorable in comparison. This opinion is strengthened by NSF correspondence.

But you want answers to the following queries, so here they are:

1. "Can you indicate what field work has been done, how many islands visited, and what critical areas have been collected on the present grant?"

I asked for \$17,400 from NSF, without padding of any kind in my estimate. When NSF asked whether \$12,000 would be acceptable I answered Dec. 12, 1955, that "I shall adjust my program to the funds available, and am sure that the Foundation will be satisfied with final results."

It is my opinion that the final result of all NSF activity is the publication of a Flora Hawaiiensis that can be used in the Hawaiian Islands and to a lesser extent elsewhere. With a shortage of over \$5,000 in our originally submitted budget of \$17,400, I did not chop off one-third from each category listed, such as Salaries, Permanent Equipment, Expendable Equipment, Transportation, Maintenance and Lodging. Instead, we "borrowed" heavily and unevenly from all these to push publication. We thought this "borrowing" from one category of proposed expenditure to another one justified. We felt at ease doing so as Mr. Montagne March 8, 1956, was not definitely opposed. He at that time stated " - - - I should think you could, within reason, transfer monies between categories as circumstances dictate." I have no complaints from Washington for cutting red tape but rather expressions of satisfaction that we completed Book 5 and are forging ahead.

Due to lack of funds our work was limited 1.) to getting specific plants, as I reported to the Garden frequently enough, on Oahu needed for illustrated descriptions, and 2.) to botanize on Lanai. We chose Lanai because a resident there offered to defray some of our otherwise prohibitive expenses. Without the kind offer of the Adolph Deshas we would never have dared leave Oahu. We thought this opportunity should not be lost. It takes lots of cash to live away from home on outside islands.

We live on rural Oahu, over 30 miles from Honolulu. Without car we would be unable to make our frequent necessary trips between home & museum, home & printer, home & plant inspector and home & some desired living specimen. For Eugenia dombeyi, alone, we made 5 - 6 trips trying to get the flower. There is no public means of transportation between our village and Honolulu except by jitney, which runs pretty much according to the time it fills to capacity with random passengers. The Volkswagen, bought for about \$1,500 of NSF funds is not an expensive item, considering its constant Flora law., use.

You state "upkeep on YOUR car cannot be charged to NSF but mileage for field work can - - - ." The ambulance, due to the elements, was badly rusting and six windows were a safety hazard. We just now had car painted and windows changed for over \$100. In our original budget to NSF we state under "Expendable Equipment and Supplies; UPKEEP of car, gas and oil - - - ." In Mr. Montagne's Feb. 23, 1956, letter we were informed "It is National Science Foundation policy that permanent equipment purchased with its funds by a grantee are the property of the institution to whom the grant is made and not to that of the principal investigator." We are not using our car, as you had thought. Our approximately 18,000 miles in about 2 years of Oahu driving comes to less than 4 cents a mile. In other words, gas, oil and upkeep came to about \$525. If we made only 50 Waialua-Honolulu round trips per year, we would use up 7,000 miles in 2 years. That leaves a remainder of 10,000 miles for additional round trips, and going after plants. So you see no NSF accountant can accuse us of wanton joy-riding in a Garden car.

## 2. "You may need another chapter outlining accomplishments to date - - -."

For the \$12,000 NSF, we have in a little over two-thirds the time allotted:

- A car in good condition for future NSF work should funds again become available, or for relinquishment to its rightful owner, the Garden.
- Including the April 7, 1958, printing we have published 308 pages of which 70 are full-page drawings, and have 2,000 book covers.
- We have a goodly lot of herbarium specimens available for study; unprinted drawings, the last mostly made of Lobelia under Dr. Wimmer's supervision; and gal. proof at printers.
- We still have some NSF funds and assets to our credit, such as a cabin already rented and paid for on Kauai where we look forward to botanizing before NSF time and cash expire.
- We have the crowning achievement of placing an attractive volume of nearly 450 pages, namely Book 5, in the hands of the public.

## 3. Your skepticism about abundance of species.

I have no copy of my February letter to Dr. Robbins where I am supposed to have stated that our flora comprises 25,000 to 30,000 species. If I wrote that, it was a slip of the pen. I stated in my old NSF appeal for the grant, page 1, item 5 - NSF hence already has the figures on record - that I estimated our flora to comprise "20,000 different species, varieties and forms of Vascular plants." I have studied Haw. plants since 1922, seriously and almost full time, so my estimate can hardly be ignored as of no value. If it is a mistake, it is at least an intelligent one. Just look at Fosberg's publications on Hedyotis, Gouldia and Diogenes. If these have codles of taxa, why should all other local genera be different? If we include Cryptogams, and exotics of all orders, 25,000 to 30,000 species, varieties and forms may even be a bit conservative. But who cares? We are appealing, as you say, for a renewal of the grant, so why mention such controversial figures if they may prevent success? Poor St. John, with his Cyrtandra, is like poor L.H. Bailey with his Rubi. When the former finally publishes, we need a Gleason to decide which of the "species" must be relegated to trivial rank. Unlike Rubus, there should be no clons. St. John, in spite of ridicule, is advancing Science by conscientiously describing and figuring his finds.

## 4. The appropriateness of charging 10% for business office services, etc.



I had heard Dr. Steere would probably charge such a fee as he, unlike Dr. Robbins, does not know that since 1922 I have overwhelmed the Garden herb. with gifts of Haw. plants. The expected charge (which is unusually reasonable considering that there was none for the past grant) and the fact that my past desired \$17,400 budget was reduced by NSF about one-third, prompted my estimating the 100 drawings at \$5,000. That high estimate - though perhaps not unreasonably so as a Berkeley artist tried to charge \$45.54 for a drawing of *Peucedanum sandwicense* - was made to insure sufficient funds for the project outlined.

It is difficult for an individual who left college to accept a position with a regular, dependable monthly salary, to place himself in our shoes. We get no salary from anywhere nor did we ask for one from NSF. This means, besides working on our bot. project, we must work at the same time for a living by taking care of rental units. That last involves being plumber, carpenter, housepainter, yardboy, janitor and charwoman, especially when one tenant vacates and we frantically must hunt for another. Then, to save cash for printing Flora Haw. sheets, do you realize Mrs. D. and I must gather from 223 one-foot high packages cluttering up our home 223 individual sheets to bind into a single Book 5? It is painful in the right shoulder. Each book takes us over half an hour to gather, bind, wrap and mail away (mostly gratis) to botanically interested individuals and institutions. This likewise involves paper work. And since 1922 I have sent gifts of critical plants to scientific institutions in America and Europe. \*ust look at any of the cabinets housing genera native to Hawaii. Who else would continue to put up with all this drudgery, hard work, expense, jealousy and abuse for the ideal of writing a Flora and preserving as herb. specimens plants that are on the verge of extinction?

To save you from any more headaches about the grant, I shall incorporate your suggestions in the appeal, have copies mimeographed or otherwise duplicated, sign twenty and rush them to you for signature and forwarding to Washington. Time is getting short. Isa and I appreciate your being so upset in our behalf about the possibility of losing a renewal of the NSF grant for us. We are as cool as a fruit of the proverbial Cucumis sativus L. We shall have excess copies made so that if NSF sets us adrift, which I doubt, we can mail the same appeal with or without sponsors or to foundations beginning from A to Z. Some one will eventually come to our aid.

Aloha,

C

Waiulua, Oahu, Hawaii.  
April 7, 1958.

Dr. A.C. Smith,  
National Science Foundation,  
Washington 25, D.C.

Dear Dr. Smith:

I herewith submit six copies of a fascicle of illustrated pages for Book 6 of the "Flora Hawaiiensis." This is a partial result of Grant No. G-2216. It is published today, with approximately 100 copies in the mails to interested individuals and institutions.

Yours very truly,

*W. D. S. Cowley*

NEW ILLUSTRATED FLORA OF THE HAWAIIAN ISLANDS

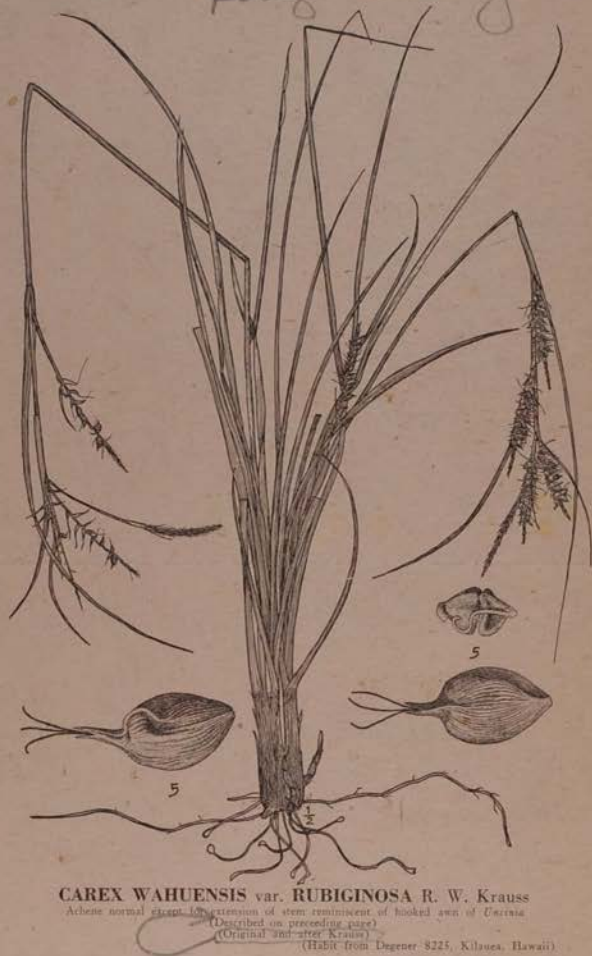
Family: 48

Genus: Carex

Species: Wahuensis

CYPERACEAE

*Sedge Family*



CAREX WAHUENSIS var. RUBIGINOSA R. W. Krauss

*Achenes normal except for extension of stem, remnant of hooked awn of *Utricularia**

*(Described on preceding page)*

*(Original and after Krauss)*

*(Habit from Degener 8225, Kilauea, Hawaii)*



Waialua, Oahu, Hawaii.  
April 8, 1958.

Dear Mr. Montagne:

It is a shame that that letter of mine with receipted bill or bills got lost in the mails. We can guard against similar trouble in the future by registering everything, but it seems a waste of postage. My bill for postage is already huge.

So long as I am writing you anyway, I may as well include the present two receipted bills here instead of waiting for two more outstanding ones: one for printing the April 7 batch of pages; and one for car repair, a bill waiting until the mechanic gets information on cost of the German-made part. We are trying to be just to the Garden in keeping the car in good condition though it would be more sensible from our standpoint to use car-painting cash for printing etc., and then eventually turn the car over to you as an outworn wreck.

It never occurred to me until you mentioned it that we have known one another for over a quarter of a century! With this in mind I shall confide a secret. Dr. Keck is so worried about our botching an NSF renewal. We appreciate his getting high blood pressure and ulcers in our behalf, but it is quite unnecessary. In a previous letter he wrote about his many duties, so we considered it a hint he preferred delegating some NSF work to us - it saves him from physical and nervous wear and tear. I doubt we will be turned out into the cold by NSF. But should we be, we won't blame him for our misfortune. We will merely approach Guggenheims and other Foundations. The Haw. Islands and their flora are too interesting for Foundations to ignore me who has published so much on the region and scattered Haw. herb. specimens far and wide since 1922.

Our project of a Flora Haw., fit for intelligent lay readers will appeal to non-botanists on the NSF examining board rather than pages of Latin gobbledegook plant descriptions. Our Flora is of everyday use in the Islands; the more technical type of work, the ideal for which Dr. Keck apparently strives, is printed in technical journals by Sherff, Moldenke, in part by myself and others with necessary but nasty, dreary, long lists of studied herb. specimens. I doubt five people per year read such an article. Our Flora Haw., on the other hand, raises the educational level of the more modest citizen, the local high school teacher who in turn imparts part of this knowledge to thousands of students in Hawaii. Our project stated plainly that it was to push publication of such a Flora. Isa & I are not quite as stupid as we look, a lucky fact.

We have 3,000 copies. Eventually we plan giving complimentary copies to every school and every library in the Hawaiian Islands. This will at the same time solve the storage problem. We are a bit scared that on our deaths, some unsympathetic trustee or executor will simply toss out Bot. treasures on a rubbish heap. It is therefore wisest to attend to some of this dis-arding now so that it is done according to our wishes.

Aloha,

<u>ADIANTHUM</u>	12
AKOKO	190 : Chamaesyce
AKOLEA	97 : Boehmeria : Grandis
ALAALAWAINUI	83 : Peperomia
<u>ALBIZIA</u>	169a
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Aralia Family	281
<u>ARCTIUM</u>	344
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Asplenium Family	17d
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Balsampear	337 : Momordica
Banana	75 : Musa : Paradisiaca : Sapientum
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Bignonia Family	321
Birdnest Fern	17d : Neottopteris
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Borage Family	314
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Burdock	344 : Arctium
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Caper Family	142
<u>CAPSICUM</u>	318
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Casuarina Family	81
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<u>Ceropteris</u>	12 : Pityrogramma
<u>CISTRUM</u>	316
<u>CHAMAESYCE</u>	190
<u>CHENOPODIACEAE</u>	281
Chilli Pepper	318 : Capsicum
China Grass	97 : Boehmeria : Nivea
Chinese-Hat-Plant	315 : Holmskiodia : Sanguinea
<u>Chrysophyllum</u>	293 : Nesoluma
<u>CIBOTIUM</u>	12

DR. OTTO DEGENER  
DR. ISA DEGENER  
68617 CROZIER DRIVE

NO.

59-126  
1213

WAIALUA, HAWAII,

*April 10, 1958*

PAY TO THE  
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*Five hundred two and 00/100* DOLLARS

WAIALUA BRANCH  
BISHOP NATIONAL BANK  
OF HAWAII

*Dr. Otto Degener*

12-1,225,618

U.S. AMOUNT	
DOLLARS	
<i>20</i>	<i>#</i>
CENTS	
FOREIGN MONEY	

PURCHASER'S RECEIPT





NATIONAL SCIENCE FOUNDATION  
WASHINGTON 25, D. C.

April 11, 1958

Dr. Otto Degener  
68617 Crozier Drive, Waialua  
Oahu, Hawaii

Dear Otto:

We are pleased to have the six reprints of a fascicle from your Book 6 for our files; you are moving right along with publication. These pages look very good to me.

You are having your share of mainland visitors. My sisters have another few days in Honolulu, where perhaps you have seen them again after their visits to the other islands. They have certainly enjoyed meeting Isa and you, and your hospitality was much appreciated. Give my regards to Carol and her mother.

I assume that Keck wrote you in connection with the draft of a new proposal. He seems to think that you should be more explicit in describing the field work and publication undertaken with the aid of NSF G-2216, which may be a valid comment. Our advisors will certainly wish to know the extent of your collecting, and you should have no difficulty in summarizing this, as I believe you have visited some unusual localities on Kauai with the aid of the funds. Of course I appreciate that you did less field work than originally planned because some of the earmarked funds were diverted to publication, with our consent as indicated in my letter of September 6, 1956. I sent you an extra carbon of that letter, which I assume you forwarded to Keck, so that he is informed of your change of plans. In the new proposal you might justify this change and the emphasis on publication. Now you are probably ready to spend more time in the field. It will be easy for you to point to accomplishments in both aspects of the work.

I feel sure that Dave is not criticizing your new proposal at random; from experience he knows what is needed to obtain panel approval and he merely wants to see that you put forward the best possible justification, especially as the NYBG is the sponsoring institution.

With best regards,

Cordially yours,



A. C. Smith  
Program Director  
for Systematic Biology

THE NEW YORK BOTANICAL GARDEN  
BRONX PARK  
NEW YORK 58, N. Y.

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ACTING DIRECTOR  
DAVID D. KECK

April 11, 1958

Mr. Otto Degener  
68617 Crozier Drive  
Waialua, Oahu, Hawaii

Dear Otto:

Thank you for your letter of April 7. You have elaborated more than I anticipated in reply to the questions that I thought should be settled in your NSF application, and I have noted all the points you have made. The questions I asked were those that occurred to me as a member of the panel that reads such requests as yours and I know the type of question that comes to the minds of the panel members. The more questions that one's application anticipates and answers the better, and so I suggested you put in a little more information about what botanizing had been done and a little more specific information about the car, etc. The panel is perfectly agreeable to paying car mileage for field work at the rate of seven cents a mile, but it would prefer to have a request made for 3,600 miles per year at seven cents equals \$250 per year than a statement put forth that \$500 is needed for car travel for two years, which says the same thing but is less definite as to what is in your mind. *for two years*

Since you do not raise the question of the number of species in the Hawaiian flora in the grant but only in correspondence to us at the Garden I shouldn't have mentioned that in my last letter. I believe the point is still valid that it is unwise to discourage the panel by the prospect that the research they are asked to support has no end in sight.

As to the 10% for overhead, I should add that this is quite in line with current NSF practice, where an institutional overhead of 15% is regularly granted. It is a recognition that it costs money to run scientific institutions beyond the salaries of its staff. It is granted in cases where staff members are away from their own institutions too, but since you aren't headquartered here the overhead is reduced to 10% in this application as it is recompense for time of the business office, Mr. Montagne, etc., in handling the account. The overhead can never be given to the individual and so the gifts of herbarium specimens from you to the Garden are not related to this question.

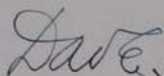
The above explanations do not add much to your knowledge for drawing the appeal together now and I expect to see 20 copies here before long for forwarding to Washington. I am glad if our suggestions



2.

have been helpful and I have high hopes that further NSF funds will be made available to you as a result.

Sincerely yours,



David D. Keck  
Acting Director

DDK/gd



ON HER MAJESTY'S SERVICE



Dr. O. Degener,

68,617 Crozier Drive,

Waialua,

OAHU,

HAWAII.

← Second fold here →

Sender's name and address: J. E. Dandy,

British Museum (Natural History),

Cromwell Road, London, S.W.7.

AN AIR LETTER SHOULD NOT CONTAIN ANY  
ENCLOSURE; IF IT DOES IT WILL BE SURCHARGED  
OR SENT BY ORDINARY MAIL

← To open cut here →

BRITISH MUSEUM (NATURAL HISTORY)

Department of Botany,

Cromwell Road,

London, S.W.7.,

11th April, 1958.

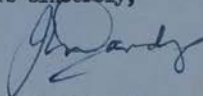
Dr. O. Degener,  
68,617 Grozier Drive,  
Waialua,  
Oahu,  
Hawaii.

Dear Dr. Degener,

On the 26th February we received from you a parcel containing specimens of 73 Phanerogams and 21 Pteridophytes from Hawaii. No covering letter has been received, but I have assumed that with your usual kindness you have presented these specimens, and they have been so entered in our records.

I am very grateful, indeed, to you for sending this material, which is a welcome addition to our collections.

Yours sincerely,



J. E. Dandy  
Keeper of Botany

Waiialua, Oahu, Hawaii.  
April 15, 1958.

Dear Al:

I have your April 11 letter. Off the record, I always considered Dave an excellent scientist and have not changed my opinion. Evidently he is likewise very human, psychologically speaking. Because I join old timers and men like Sherriff in interpreting *Argyroxiphium*, *Wilkesia*, *Dubautia* and *Raillardia* as distinct (though intergrading) genera instead of following Dave's monograph in which he lumps them into two, he evidently got peeved.

As Dave is my superior regarding the NSF application and time is too short to straighten out details by correspondence, I am forced to follow his advice. I am doing so with mental reservations, however. Should the grant be renewed, I may be obliged to petition Mr. Montagne and NSF at the critical time to modify some phases of it. For example, instead of continuing the purchase of drawings, I am to have an "Artist, part time, 4 mos. at \$350." That comes to \$1,400 per year. Two years ago I asked Waiialua High School Principal Larsgaard to find a student artist for me. He failed. Should I find a striking Filipino or Chinaman sugar worker to draw for me 120 days per year, I cannot expect Iso to cook for him, eat lunch with him and thereafter wash his dirty dishes. The plan is ridiculous.

Instead of having the artist work in my home, should I be able to hire one for 120 days to work for me at the Bishop Museum for \$1,400 I cannot leave him to work without supervision. That means Mrs. Degener and I must make 120 Waiialua-Honolulu round trips per year or (the distance is about 70 miles and over 2 hours' driving daily) 8,600 miles. Yet Dave allows me for auto only 4,000 miles per year, including field trips! The figures simply do not add up.

Presently I chiefly purchase drawings and even make a few minor ones myself. For instance, I am trying to get Wimmer have his artist draw all *Lobeliaceae* of the Islands for me for about \$300. This would be under Wimmer's supervision from the Excellent collection in Vienna. This is the opportunity of a life time. I have a few score already. I cannot hire an artist by the hour for such work. I pay by the drawing or by lot.

Isa and I spent about three weeks on Lanai, working mainly along the summit, because a Lanai resident offered to pay part of the expenses. In February we botanized three weeks on Canton Island because Civil Aeronautics Administration offered to feed, house and fly us there free. This trip has nothing to do with NSF, but it shows we are eager to get in the field if we can swing it financially. There are eight more months for the NSF grant to run. Long ago we rented a cabin with NSF cash for any two months of our choice on Kauai. Why does Dave get so impatient and ask for an impressive list of areas botanized at this premature time? He forgets my successful field work began as early as 1922. My judgement on the spot is better than that of a stranger to the Islands thousands of miles distant. It seems too bad I have a sponsor - without one the proposed cost to NSF would be reduced 10% and nervous wear and tear as well.

In summary, I detest quibbling and am accustomed to perform agreements in good faith. In this case Isa and I are a bit peeved at Keck's intimating I am fleecing NSF. Enclosed is a copy of the twenty copies I am forwarding Keck to sign and pass on to NSF officially. Whatever the final decision, Isa and I won't cry about it. We are thankful we got a grant in the past, and would feel no resentment if we failed to get it in the future. We would adjust our lives according, probably concentrating on completing a book on plants of the tropics for MacMillan, started as four pamphlets in N.Y.B.G., in Carol Woodward's time. She is still interested. She arrives Friday.

Aloha,



Wai'alua, Oahu, Hawaii.  
April 16, 1958.

Dear Mr. Montagne:

Enclosed are some more bills, most of them for car upkeep. Without this expense the ambulance would soon become a wreck. I have another old expense - a certified cheque sent Dr. Wimmer of Vienna - for which I have not yet received acknowledgement.

This same package encloses copies of my new appeal for a grant to be mailed to Washington with Dr. Keck's signature. As he wanted a few changes made from my original budget, I made them against my own judgement. I hope that such changes will not jeopardize success of our project. When the time comes some years hence, I may be obliged to ask you to back me in petitioning N.S.F., for a slight modification.

The Degener-NSF relations were going on swimmingly with mutual confidence on both sides until apparently the unfortunate loss of the \$750 more-or-less proof of my payment of the printing bills. With chatty letters criss-crossing between N.Y. & Washington & Hawaii, I guess gossip got around that I was financially careless. Even though proof of this fallacy turns up later, psychologically the first belief tends to stick in the subconscious! This, and my not seeing eye to eye botanically with Dr. Keck, is a distinct disadvantage.

If the NSF renewal falls through, it will be due to too many over-conscientious cooks stirring the Haw. broth, not due to an inherent weakness of fault of the project.

We are cleaning up our guest room for the Woodwards, arriving Friday. Shortly thereafter, Ray Fosberg comes to the Islands. It will be nice seeing them.

Aloha,

BUDGETCalendar Year

	<u>1959</u>	<u>1960</u>	<u>1961</u>
<u>Salaries</u>			
Artist, part time			
4 mos. at \$350.	\$ 1,400.	\$ 1,400.	\$ 1,400.
Assistant	200.	200.	200.
<u>Travel</u>			
Field work with automobile			
4,000 mi. @ 7¢	280.	280.	280.
Transportation of car from island			
to island, or hire of U-Drive			
car, whichever is less costly	500.	500.	500.
Per diem in the field for two			
persons (outer islands) 65 days			
@ \$20.	1,300.	1,300.	1,300.
Expendable supplies	200.	200.	200.
Publication	<u>4,000.</u>	<u>4,000.</u>	<u>4,000.</u>
	<u>\$ 7,880.</u>	<u>\$ 7,880.</u>	<u>\$ 7,880.</u>
Total			\$23,640.
Institutional overhead - 10%			<u>2,364.</u>
Total amount requested			\$26,004.

Waiialua, Oahu, Hawaii.  
April 16, 1958.

Dear Dave:

I have your less morbid letter of April 11. Contrary to my judgement, I made the changes in budget that you advised. When necessity prompts it, I am confident NSF will allow a modification. We have not the time to be arguing fine points of budgetary when the appeal must be in Washington Shortly. Anyway, I have the copies of the appeal, costing me about \$30, already made before I realized the nuisance to which we are exposed if we adhere to the presently proposed budget too closely. Not knowing local conditions, a New Yorker like you cannot be expected to avoid pitfalls an old-time Kanaka like me avoids.

For example, you want me to hire an "Artist, part time, 4 mos. at \$350." Suppose I can get such a Filipino or Chinaman - there is a sugar strike on and loafers may be easy to hire - you condemn us to one of two awkward predicaments. If I have such a person work 120 days per year at our home (artists need constant supervision for work of Degener standards), we have the extra expense of one more mouth to feed; and my wife is expected to cook for the stranger, we are to eat lunch with him and she is to wash his dirty dishes after lunch. Would you expect Mrs. Keck to put up with this drudgery 120 days per year? Ask her for the fun of it.

Suppose, on the other hand, I can get such artist to work at the Museum for 120 days per year for me; Then Mrs. Degener and I must drive 120 times seventy mile, round-trips between Waiialua and Honolulu. That means 8,400 miles per year just to supervise the artist, plus over 240 hours of driving. Yet in your budget you allow us only 4,000 miles of driving per year, and this is to include field work too. It can't be done! Here is hoping NSF won't notice this discrepancy.

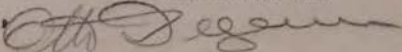
There is also no means for freeing the Garden for paying insurance and upkeep of the ambulance which, officially, belongs to the Garden and not to me. Is such cost in a car that is bound to increase in upkeep expense as it approaches six years of age to come out of the 10% institutional overhead? I think that is really an error that might be corrected by later appeal to NSF or to some specimen purchase deal.

In being too conscientious yourself and not delegating minor decisions to your staff, in whom you should expect a certain amount of intelligence, such slips are bound to arise. I do not consider them vital as Dr. Waterman's policy is one of allowing considerable latitude to an applicant's plan. In short, here are the twenty copies for NSF. Please sign and send them on to Washington, and let us drop this matter for the time being. I want to describe Lindernia.

We appreciate your interest in our grant but due to the great distance between New York and Hawaii, no one can expect everything to go smoothly. Not as an official of NSF but as a friend of long standing I took the liberty of mailing a copy of the appeal, but not this letter, to Al out of courtesy. Others I am salting away so that if there is any inkling of NSF failure, I can rush them off, as a private individual, with a few changes to eleemosynary institutions with funds available for scientific work.

I think we should cheer up. In 10 or so years we very likely will be pushing up the dandelions in Woodlawn anyway. Why be so lugubrious now?

Aloha,



Mokuleia Beach,  
Oahu, Hawaii.  
April 20, 1958.

National Science Foundation,  
Washington 25, D.C.

Dear Sirs:

1. NAME AND ADDRESS OF PRINCIPAL INVESTIGATOR:

I, Otto Degener, have been associated with the New York Botanical Garden, Bronx Park, New York 58, New York, as student or otherwise since 1922, and with the title of Collaborator in Hawaiian Botany since 1935. The project, for which I herewith request a grant-in-aid, would be conducted by myself as principal investigator under the aegis of Dr. David D. Keck and presumably Dr. William C. Steere.

2. TITLE OF PROPOSED RESEARCH:

The title of the proposed research would be "Botanical Exploration of the Hawaiian Islands and Continued Publication of Illustrated Descriptions in the 'Flora Hawaiiensis' and Elsewhere."

3. DESIRED BEGINNING DATE OF RESEARCH:

Actually this proposed project is the continuation of work conducted under Research Grant NSF - G2216, officially intended to terminate about December 1958. This grant enabled the publication of 308 pages, of which 70 are full-page plates. It thus enabled completion of the 444-page Book 5 of the "Flora Hawaiiensis or New Illustrated Flora of the Hawaiian Islands"; and the amassing of additional Hawaiian herbarium specimens, many not yet identified. Because the remaining funds for the past grant are presently chiefly allocated for the payment of plant drawings already ordered and for the publication of galley now at the printers, work is slowly bogging down for lack of additional funds. The new grant, therefore, should begin within a few months if possible.

4. TIME PERIOD FOR WHICH SUPPORT IS REQUESTED:

The period should run for approximately three years, the estimated time needed to complete another unit of the Flora.

5. DESCRIPTION OF PROPOSED RESEARCH:

Further collection and study of the Hawaiian flora. The chief non-literary aim would be the collection and study of endemic plants, especially Lobeliaceae, Goodeniaceae and Compositae. While in search of these, members of other families encountered would not be ignored. The chief literary aim would be the completion of Book 6. Of this book 54 pages to date have been published and distributed thanks to the Foundation's generous support.



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There is urgency in tackling the above problem. The Hawaiian Archipelago is so isolated geographically in the Pacific that perhaps only a few hundred propagules of Vascular Plants ever reached its shores to survive and leave offspring to within historical times. Of these offspring all but perhaps 2% are endemic. The endemism is not only limited to the archipelago as a whole. Indeed, it is so marked that many species are known from only one isolated mountain summit, some arid ridge surrounded by a lush sea of vegetation, some darkly shaded gulch, or some isolated kipuka or oasis in a barren waste of aa lava.

Our knowledge of the Hawaiian flora is woefully incomplete as the continuous discovery and publication of novelties up to the present time indicates. Many of such novelties are being collected even in areas that are being fast despoiled of all native vegetation due to the ravages of feral goats, sheep, deer and cattle; due to competition against weeds and against trees planted by the Territorial Government in the Forest Reserve; and due to huge areas being given over to ranching or to the cultivation of sugarcane, pineapple and macadamia. Such destruction of the native Hawaiian flora is continuing with ever-increasing fury, and cannot be stopped! Many species collected by early workers, and even by modern ones like myself, are already extinct and known to us only from herbarium specimens deposited in scientific institutions in America and Europe. Many more are on the verge of extinction and should be collected and studied before it is too late. In this age when we are reaching out for more intimate knowledge of other planets - the grass perhaps appearing greener on the other side of the fence - we still owe to future generations a representative set of herbarium specimens of our unique Hawaiian flora that we, due to commerce, ignorance and vandalism, are rapidly exterminating.

Though the collecting, describing and illustrating of the native flora is of prime importance, the introduced flora must not be neglected. Exotics should be collected and preserved as proof of their arrival in the Hawaiian Islands at a certain date. Careful comparison of these pioneer specimens with their offspring in the Islands centuries hence may give a clue as to the rapidity of speciation and other evolutionary problems not yet formulated by present-day investigators.

I spent the college year 1922-23 at the University of Hawaii as Graduate Student in Botany, diligently collecting Ferns and Flowering Plants. I tried to identify my finds with the aid of various pertinent pamphlets and the only general floristic work about the Islands extant. This was Hillebrand's "Flora of the Hawaiian Islands," essentially completed in 1871 and published posthumously in 1888. Coming to realize that the flora of the Hawaiian Islands was still relatively unknown, I resolved to work toward helping correct that deficiency. With this in mind, I returned home to New York City, continuing the study of my Hawaiian plants under the guidance of Drs. Britton, Rydberg and Barnhart at the New York Botanical Garden. In 1925 I emigrated to the Islands permanently to collect as much of the dwindling native flora as possible and to help record it.

Due to limited library and herbarium facilities in the Islands, I published relatively little entirely alone but siphoned my finds to leading specialists throughout the World. These then published the results of my discoveries alone or jointly with me in their monographs. Almost every monograph dealing with Hawaiian plants published after



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Due to limited library and herbarium facilities in the Islands, I published relatively little entirely alone but siphoned my finds to leading specialists throughout the World. These then published the results of my discoveries alone or jointly with me in their monographs. Almost every monograph dealing with Hawaiian plants published after

about 1928 at least cites my collections, often quotes me and not infrequently contains descriptions of novelties published in collaboration with me.

I retain no herbarium of my own but distribute my finds usually as gifts to leading botanical institutions throughout America and Europe. They are thus available for any worker to study. I seldom retain specimens so that I alone, and no one else, can study them before I have completed with them.

To date I have published alone (or nearly so) the following books: "Plants of Hawaii National Park"; "Naturalist's South Pacific Expedition: Fiji"; and "Flora Hawaiiensis or New Illustrated Flora of the Hawaiian Islands," Books 1 - 5, comprising over 1,600 pages.

To date my collections, my observations, my illustrations or descriptions of interesting finds or of novelties by myself and mostly collaborators occur under the following bibliography:

This appended bibliography is uncritical and incomplete as I lack access in the Islands to some references. It shows, however, that it has ever been my purpose to speed up our knowledge of the flora of the South Seas. As announced over twenty years ago in "An Opportunity to Cooperate in the Study of Hawaiian Plants" (*Torrey* 33:158), my specimens always have been available for study by any qualified specialist anywhere. The following workers have taken advantage of my offer. For example, Arnold has made use of a score of my cuts to illustrate his book about "Poisonous Plants of Hawaii," Sheriff has described many novelties in collaboration with me, Yuncker has described novelties in *Cuscuta* and *Peperomia* based on my collections, and Chandler now thanks me in the preface of his book for help. So far as Hawaii and Fiji are mainly concerned, my collections and observations have been of considerable value. I have influenced the work of most of the following writers favorably.

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As announced over twenty years ago in "An Opportunity to Cooperate in the Study of Hawaiian Plants" (Torreya 33:158.), Degener's specimens were available for study by any qualified specialist anywhere. The following bibliography shows how many articles have been published in which his specimens and/or observations have been used. He believes this list eloquently proves that his choice of promising collecting areas is for the most part sound, and that continued collecting by him is worth while. Of course this bibliography is uncritical and incomplete as he lacks access in the Islands to some references, and hence could not check them.

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So Mr. Targ...  
The above is hand  
largely on my part of it  
already from Philip Beach.  
home at the success of my collecting  
indicates the success of my collecting  
and, particularly, that I have  
through (article, by Sher) in doing more (this, log)  
I have called attention to gathering and introduced  
obliged to live surrounded by cultigens and introduced  
novelties for inclusion in the active addition of  
flow of the Hawaiian Islands. Who  
knows, I may get the actual des-  
cover of I have plant families  
similar to Smith who, with  
Bailey, graciously named  
one in my  
house.  
O.D.



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I am primarily a collector in regions where collecting is extremely important due to the rapidity with which the native flora is being exterminated; secondarily, a botanical writer.

The list above shows 1.) that my activities during the last thirty-six years, thanks to collaborators, have been eminently successful and 2.) the surprising number of genera in which novelties are being discovered to this day. I wish, therefore, to continue my activities pretty much along the same lines. Some librarians, who do not realize the great number of species still awaiting discovery in the Islands nor that our botanical "knowledge" is still in a state of flux, believe a firmly bound flora to be best. This is a fallacy as such a work would require the addition of yearly supplements, making the whole soon unwieldy to use. the only practicable method is to continue the Flora loose-leaf, realizing that it is of preliminary character. Years hence, when the discovery of novelties tapers off, only then should the Flora be printed in bound form, with the illustrations reduced by half. With aid of the photo-offset process, the cost should be bearable.

#### 6. FACILITIES:

Facilities presently available consist of my home on the Island of Oahu as laboratory and study, my collection of 500 books and pamphlets about Hawaiian and non-Hawaiian plants, a Volkswagen ambulance purchased for \$1,500 with NSF funds, microscope, crude dissecting scope, etc. In addition, Mrs. Degener and I, through the kindness of its Director, have the use of an office at the Bishop Museum in Honolulu, of the library and of the herbarium. In the latter are many of our plant finds, deposited there from time to time as gifts.

#### 7. PERSONNEL:

- I. Otto Degener, was born in Orange, New Jersey, May 13, 1899, receiv-

ing my early education at Trinity and Collegiate Schools in New York City, and earning the bachelor of science degree in 1922 at Massachusetts Agricultural College (now the University of Mass.). I first came to Hawaii in 1922 as tourist and student of botany, earning my master of science degree in 1923 at the University of Hawaii. I did post-graduate work at Woods Hole, Mass., at the New York Botanical Garden and at Columbia University. I was graduate assistant at the University of Hawaii, later accepting the post of naturalist at Hawaii National Park. Shortly thereafter I published my "Plants of Hawaii National Park." This was a "byproduct" of early work on my "Flora Hawaiiensis," published later.

I was botanist on the Anne Archbold Expedition to Melanesia in 1940-41, conducting about eight months field work in Fiji. My collections were monographed largely by A.C. Smith who, with I.W. Bailey, named a monospecific Ranalian family Degeneriaceae in my honor even though I was not the initial discoverer. The finding of Degeneria in good flower and fruit resulted in a group of publications by Smith, Swamy and others.

In 1952 I received the honorary degree of doctor of science from the University of Massachusetts, my alma mater.

I had corresponded for a number of years about Lepturus and other genera with a Dr. I. Hansen of the Botanisches Museum, Berlin-Dahlem, Germany. Finally arriving in Berlin to study Hillebrand's Hawaiian ferns I was surprised to find Dr. Hansen a lady.

Mrs. Degener (née Dr. I. Hansen) is the second person permanently interested in furthering the project for which I am requesting a grant-in-aid. Due to the Second World War her studies were at times interrupted. Nevertheless, in 1944 she attended Albert-Ludwig University, Freiburg, Baden, Germany, specializing in the Natural Sciences. In 1945-49 she studied at the Friedrich-Wilhelm University, Berlin, receiving her degree of Dr. rer. nat. (Dr. Nat. Sc.) magna cum laude. During 1945-46 she was also Botanical assistant at the Botanisches Museum, Berlin-Dahlem, and in 1948-49 lecture and laboratory assistant to Drs. R. Pilger and H. Sleumer. In 1949-53 she was botanist at the same institution, and from 1948-53 likewise assistant in Pharmacognosy at the Freie Universität (Free University), Berlin-Dahlem. Since marriage she has been actively engaged with me in collecting and describing the local flora, unfortunately interrupted by house-keeping drudgery a charwoman without technical training could do as well.

Mrs. Degener's publications are:

- Hansen, I. 1950. Europäische Arten der Gattung *Erica* L. Bot. Jahrb. 75: 1-81.  
 Hansen, I. & Gerloff, J. 1952. Beiträge zur Kenntnis einiger Volvocales. Ber. Deutsch. Bot. Gesell. 63(4):87-93.  
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 Degener, I. & Degener, O. 1956-58. Flora Hawaiiensis. Over 250 loose-leaf pages.

## C. BUDGET FOR THREE YEARS:

	First Year	Second Year	Third Year
<u>Salaries</u>			
a. Artist and/or guide 4 mos @ \$350	\$1,400	\$1,400	\$1,400
b. Assistant (Dr. I. Degener)*	200	200	200
<u>Travel</u>			
a. Field work with auto 4,000 mi. @ 7¢	280	280	280
b. Transportation of car from island to island, or hire of U-Drive car, whichever is less costly	500	500	500
c. Per diem in the field for two persons (outer islands) 65 days @ \$20	1,300	1,300	1,300
<u>Expendable Supplies</u>	200	200	200
<u>Publication</u>	4,000	4,000	4,000
	<u>\$7,880</u>	<u>\$7,880</u>	<u>\$7,880</u>
Total			\$23,640
Institutional overhead - 10%			<u>\$2,364</u>
Total amount requested			\$26,004

\*To enable Mrs. Degener to free herself for botanical work by using her yearly salary to hire a charwoman for 4 hours per week @ \$1.00 per hour.

I have acquired valuable experience by being a recipient of a three-year grant of \$12,000 from NSF. The sum was ample for completing the publication of Book 5 of the Flora Hawaiiensis, begun by me alone in 1948, for which Mrs. Degener and I are extremely grateful. The sum, however, was not sufficient for efficient or extensive field work. I have therefore revised my estimate of former years to the above to obviate past inability to do much botanizing on outside islands.

*Dr. Otto Degener*

Principal Investigator & Applicant



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DAVID D. KECK

April 22, 1958

Dr. Otto Degener  
68617 Crozier Drive  
Waialua, Oahu, Hawaii

Dear Otto:

I do not know whether you would consider this one of my "less morbid" or more morbid letters, but at any rate we have received the mimeographed proposals to the National Science Foundation and I shall forward them to Al as soon as we can add lines for signatures of New York Botanical Garden officials and staple the material together.

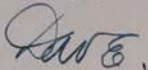
I am sorry if you have made budget changes contrary to your own better judgment, but one thing you and I are aware of, namely, that once the grant is made much latitude is given the investigator in spending the money for the most urgent needs of his research program even if this modifies his proposed expenditures. So, if you do not like the art work done one way, try another.

We are sending this off to Washington promptly and hope it gets favorable attention there.

I was interested in the latest pages from *Flora Hawaiiensis*, with the discussions on Dubautia and Railliardia.

The only snow we see nowadays are the white blossoms on the fruit trees. Spring has come at last.

Cordially yours,



David D. Keck  
Acting Director

DDK/gd



Waiʻaleʻale, Oahu, H. I.  
April 28, 1958.

Dear Dave:

I have your cheerful April 22 letter before me.

I have always prided myself on being "broad-minded" and never getting "peevish." But evidently yours truly is after all no different from the average run of botanists. As Carol Woodward is our house guest, Isa and I finally could not restrain our showing her your "morbid" letter. She thought our pessimistic being-in-the-dumps attitude about it just plain silly. Of course I have not forgotten that the Garden has my best set of plants - that includes all unicates - and that for years monographers have published on Hawaiian genera without being aware that the prize material had been lying about unmounted and beyond reach!

I agree with you that if the grant is renewed, NSF will allow us to make wise adjustments as we see fit. I believe likewise that they will be pleased to have Book 5 before the public as concrete evidence of what NSF funds have in part accomplished. In comparison, ten thousand numbers of identified but unprinted plants stored away in Museum cabinets ~~is~~ are hardly very eloquent.

I got a funny "peevish" letter from Skottsberg: Fagerlin and Fosberg, according to Skottsberg himself, are supposed to have collected a strange Psychotria on Mt. Waiʻaleʻale, 35 miles distant. Fosberg has Psychotria in ms., and his unpublished varieties rockii & ofuense are lying named in the Bishop Museum herbarium. Now S. expects Mrs. Degener & me to hunt for Psychotria on this mountain! First, it would be like hunting for a needle in a haystack and, second, it would merely spoil some of Ray's thunder should I mail material to S. If Skottsberg wants Oahu Psychotria to bust into print, he can ask Ray personally for their loan. Ah Rimmel!

Isa & I wish to thank you again for the trouble you have taken in our behalf. I am glad C.W., got us back to a sane view.

Aloha,

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ACTING DIRECTOR  
DAVID D. KECK

April 30, 1958

Dr. Otto Degener  
68617 Crozier Drive  
Waialua, Oahu, Hawaii

Dear Otto:

I have your letter of April 16 together with the receipted bills attached thereto, which I am glad to have and which will be kept for support pending a further accounting of the grant to the NSF. As regards the letter which seemed to have gotten lost, it was merely something that I checked up on personally and was not called to the attention of the NSF in any way. In fact, I have had no communication with the NSF only insofar as the submission of an interim accounting is concerned, copy of which I sent to you. I do not think that any gossip got around that you are financially careless; and insofar as Dr. Keck's connection is concerned, he is very familiar with the requirements for these grants and the reaction from the people who examine them down in Washington, and therefore knows what they look for. I am sure it was only in a spirit of helpfulness that he suggested some few changes in your recent appeal. Whatever the outcome may be as to the continuance of the grant, I am sure that whatever Dr. Keck suggested would not have worked against a favorable decision but would have greatly added to the chances of a favorable one. I hate to see you and Dr. Keck getting crossed up, as I know he only has your best interests at heart.

I might take this opportunity to acknowledge your letter of April 8 and will also keep the receipted bills attached thereto. In view of the nature of the contents of the letter, however, I do not think that I will leave it in the general file. You did mention in that letter the idea of sending all your letters by registered mail. Even though we may have lost one back there, I do not think that would be necessary as I know the expense of that adds up very greatly and I would rather see you use the money for your work.

As I understand it, the attitude of the NSF is most lenient and helpful and they are quite unlikely to make any criticism whatsoever of your expenditure of the grant money. Any questions that I ask are merely to forestall a possible audit and to put our house in order so that in the unlikely event that we are asked to produce records or are asked questions,

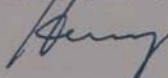
2.

then I will be able to properly defend your cause.

I note with interest that the Woodwards are expecting to pay you a visit and also that Dr. Fosberg will be there later on. It only goes to show that maybe even I will make it one of these days.

My best regards to you and Mrs. D.

Sincerely yours,



H. de la Montagne  
Secretary

HM/gd

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ACTING DIRECTOR  
DAVID D. KECK

May 2, 1958

Dr. Otto Degener  
68617 Crozier Drive  
Waialua, Oahu, Hawaii

Dear Otto:

Thank you for your letter of April 28. I am most happy to be forgiven for any concern I caused you by my earlier letter covering points on presenting the grant. We can agree now that the material has received our most careful attention and results will be known eventually.

I am quite worried about one point raised in your letter, namely, the completeness of your collection here at the Garden. When we were looking for the Wikstroemias for Skottsberg we went through the backlog of over 100,000 specimens unmounted and mounted ~~as~~ all your material that was found. There were considerably less than 1,000 sheets in this, as I recall it, and many Wikstroemia numbers requested by Skottsberg did not turn up. I am wondering if there is still more material of yours that you thought were here which were not received in times past. Possibly some of the things that were sent to other institutions for forwarding to us as per your instructions were not forwarded. I do not know. In the earlier of my years here during one of your visits, I guess, it was pointed out that we had not been able to keep up with the mounting of all your collections and that there was some backlog which we had had for sometime. Frankly, I was relieved to find that there was not as much there as I had thought, and so far as we know now all your material is in the herbarium. So, monographers have not been deprived of any quantity of your material that was stored in this building.

I return Skottsberg's letter, having noted the contents.

If Carol Woodward is still with you, give her my best regards, and the same to Mrs. Degener and yourself.

Sincerely,

*David D. Keck*

David D. Keck  
Acting Director

DDK/gd



18328 Plummer Street  
Northridge, California  
May 4, 1958

Dear Dr. Degener:

I just received your letter upon my return from a trip into Mexico. I would be very much interested in examining your Canton Island algae, but I'm afraid I cannot see an opportunity insofar as time is concerned in the immediate future. I am not at present working at any permanent job, and my time is all taken up with diverse projects and other activities. I am trying to find time now to sort a collection of Gulf of California algae obtained on a cruise last month before preparing a new course for summer teaching at UCLA. Simultaneously I am serving as curator of botany at the L.A. Museum, and consultant for the State water pollution board for which an annual report must be written during the next five weeks.

I have applied to NSF for a grant to continue work on my Mexican algal monograph, and, if this should come through I may get back for a while into nearly full time research following a trip to Clipperton Island in August. Accordingly, there may be some time next fall or winter to work on Canton island algae of which Max Doty also has some, I think. One might want to write them up if the collections are adequate. Would you have any source of financing for such a job? Let me know more of your needs and interest in the Canton Island algae.

Sincerely yours,

*E. V. Dawson*

Mokuleia Beach, Waiialae, Oahu, Hawaii.  
May 5, 1958.

Dear Mr. Montagne:

I have your April 30 letter before me. I am glad everything is going so well thanks to your and Dr Keck's advice. Now it is up to NSF whether we get a renewal or not. There is so much satisfaction in knowing that the "die is cast" and we need not excite ourselves in pondering whether this or another plan is best for submission. Ima and I have the tendency to expect the worst. If we are turned down, we shall not be disappointed; if, on the other hand, we get a renewal, we shall be elated.

The Woodwards are touring the Islands of Hawaii & Maui for a week - much too short a trip \* returning to our home Friday. Carol G., did a little figuring on Book 5 as though I were an author submitting a ms., to Macmillan. She estimated such a book in an edition of 3,000 copies, because of the expensive type and full-page plates, would be sold by her company for \$25 each in order to insure a profit to it and author. But, should an institution publish it, an eleemosynary institution not trying to make a profit for itself and author, the retail price would be \$15. The price we set on the book is \$5. Our purpose, of course, is to get it distributed rather than having it stored away for years. It would be so much fun if we could get the Flora into the local schools as a source book for biology teachers. Presently they are teaching a lot of "hogwash" for want of bot. literature on native plants. For garden plants, though, they have Marie Neal's excellent work.

We want my cousins, the Paul Degeners whom you probably know, to visit us next winter. Should you join them you, all, could so nicely and economically hire a U-drive car to tour all our beautiful islands. I am ALMOST a professional in giving good advice regarding what to see and to what outside-island hotels to go.

Perhaps next year we should look into this funny non-alcoholic insurance outfit.

Aloha,

NATIONAL SCIENCE FOUNDATION  
WASHINGTON 25, D. C.

May 7, 1958

Dr. Otto Degener  
68617 Crozier Drive, Waialua  
Oahu, Hawaii

Dear Otto:

Your letter of April 15 and a copy of your new proposal have now been received. I have found time to scan the proposal, but of course the official copies have not yet reached us. When they do, I shall acknowledge them with the usual form letter.

It seems to me at first glance that the proposal is very well prepared, and I sincerely hope that our advisors will agree to the continuation of support. The budget seems very reasonable to me, and I am sure that all the items can be justified.

I have not yet seen either of my sisters since their return and in fact I do not know exactly where they are, but I expect that they are traveling between California and Massachusetts. They were extremely appreciative of the many kindnesses which Isa and you showed them during their visit to Honolulu.

With best regards,

Cordially yours,



A. C. Smith  
Program Director  
for Systematic Biology

NATIONAL SCIENCE FOUNDATION  
WASHINGTON 25, D. C.

May 7, 1958

Dr. Otto Degener  
Mokuleia Beach  
Waialua, Oahu  
Hawaii

Dear Dr. Degener,

We are pleased to acknowledge receipt of your application for a grant in support of the research proposal entitled below.

Your proposal has been assigned to the appropriate Program Director for study and evaluation, and he will communicate further with you.

Sincerely yours,

*Edw. W. Hilton*  
Edward W. Hilton  
Administrative Officer  
Biological and Medical  
Sciences Division

Ref: Proposal B-5674

"Further Botanical Exploration of the Hawaiian Islands"

c.c. Dr. David D. Keck

NSF Form 912



NATIONAL SCIENCE FOUNDATION  
WASHINGTON 25, D. C.

May 9, 1958

Dr. Otto Degener  
68617 Crozier Drive, Waialua  
Oahu, Hawaii

Dear Otto:

This will let you know that your proposal has been assigned to the program for Systematic Biology for consideration and that this is the appropriate office for further correspondence concerning it. If you wish to submit additional information, or if you wish to learn of the progress of your proposal at any time, please do not hesitate to write me.

In connection with this proposal, we should like to know what support you are receiving from other organizations for any research projects. This information should include titles of the projects, and sources, amounts, and duration of financial support. We should also like information concerning any other applications you may have made and which are still pending.

As you are doubtless interested in the timetable scheduled for your proposal, I can tell you that it will be submitted to our Advisory Panel for consideration before their meeting during the early summer. If the decision on your proposal is then favorable, and if funds with which to activate it are then available, it should be possible for you to obtain these funds early in the autumn.

Sincerely yours,



A. C. Smith  
Program Director for  
Systematic Biology

cc: Dr. Keck

FL 9A-2a

B-5674 = Further Botanical Exploration of the Hawaiian Islands

Mokuleia Beach, Waialua,  
Oahu, Hawaii.  
May 10, 1958.

Dear Dr. Dawson:

I have your May 4 letter before me.

Mrs. Degener and I were interested to learn of your application for an NSF grant to continue work on your Mexican algal program. We likewise applied for a renewal to work on our Haw. Flora. Perhaps you might word your grant to include Mexican "and other" algae. We, for example, were to specialize on plants of the Island of Kauai but broadened our appeal to include ALL islands of this archipelago.

I collected Canton algae in 1950-51, handing them over to Max Doty at his own request for identification. He determined them to the genus - a task I, a former student of Hazen & Lewis at Woods Hole, could have done as well - and finally reported that the janitor had thrown my collection away! To what extent Max distributed any of my numbers listed in Ray Fosberg's Atoll Research Bull. 41 : 41-42. 1955, is any one's guess. I knew Max, Mrs. Doty and the children, but don't know his new Oriental bride with whom he is now on a grand tour. My time and cash in getting the 1950-51 collection on Canton and bringing it home by 'plane was just about wasted. I am fond of Max and wish him well. But when he visited us some months ago, I hoped it would be the last time. Had I not known his first family, I might have felt differently.

Regarding our Canton Atoll algal finds, I want them critically identified for inclusion in a report Mrs. Degener and I are writing for the Atoll Res. Bull. Dr. Drouet has our Cyanophyceae.

I fear there are no funds for this project. All the student can expect is "glory" in doing the task well, and hence perhaps a better opportunity to be asked to conduct research in the Pacific. Publication of Bull. 41 by Gillaspy and me resulted in a three weeks' expenses-paid-stay on Canton for Mrs. Degener and myself last February. We had a truly delightful and fascinatingly interesting time.

If you are unable to work up the 50% or so Canton atoll algae within a reasonable length of time due to your many commitments, could you suggest some one able to take over?

Sincerely,

THE NEW YORK BOTANICAL GARDEN  
BRONX PARK  
NEW YORK 58, N. Y.

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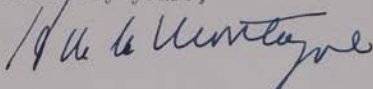
May 14, 1958

Dr. Otto Degener  
68617 Crozier Drive  
Waialua, Oahu, Hawaii

Dear Otto:

I have your letter about the renewal of your application with the NSF and hasten to assure you that everything has been taken care of. The application was sent in by Dr. Keck on April 23rd and the NSF has acknowledged it to you under date of May 9th, in which they have asked a few more questions which you can easily answer. In the meantime I have cabled you to this effect and have also talked with your sister who says she will write you to the same effect.

Sincerely yours,



H. de la Montagne  
Secretary

HM/gd

68617 Crozier Drive, Wai'alea,  
Oahu, Hawaii.  
May 17, 1958.

Dear Dr. Smith:

Thank you for your kind letter of May 9 advising me that my proposal for "Further Botanical Exploration in the Hawaiian Islands" has been assigned to the appropriate office for processing.

Though I have been officially a staff member of the New York Botanical Garden this position is purely honorary and involves no salary or remuneration of any kind. Mrs. Degener and I receive no support from any organizations for any research projects whatsoever, nor have we applied for any.

Last February, after Book 5 of the Flora Hawaiiensis was completed, (partly in celebration) we took a three weeks' "busman's holiday." On invitation of the Civil Aeronautics Administration, we flew at the Administration's expense to Canton Atoll on the Equator to be their guests. We were to observe and record the biological changes that transpired there since my stay on Canton in 1950-51. For this courtesy, Mrs. Degener and I are to publish a brief report in the Atoll Research Bulletin. To write such a report will not materially interfere with our floral project in the Hawaiian Islands.

*on our observations*  
We absorb some of the expenses of our project ourselves when our funds permit. In addition, we send our books and herbarium specimens gratis to individuals and institutions in appreciation for favors in consulting literature or specimens not available to us in the Hawaiian Islands. Such welcome gifts stimulate prompt and careful replies, favors that otherwise would involve the purchase of costly books or photostats.

It may be of interest to note that herbarium specimens in recent years have gone to the institutions cryptically mentioned below:

N.Y.B.G.  
Smithsonian  
Bishop  
Arnold  
Kew  
Univ. Mass.  
Berlin  
Vienna (Dr. Wimmer)  
Chicago (Dr. Sherff)  
Mich.  
Minn.  
British Mus.  
Geneva  
*Mo. Bot. Gard.*  
Depau (Dr. Yuncker)  
Göteborg (Dr. Skottsberg)  
Leiden  
Ottawa  
Tokyo

Cincinnati  
Rutgers  
Munich (Dr. Merxmüller)  
Graz (Dr. Widder)  
Cornell  
Bailey Hort.  
Leiden  
U.C.L.A.  
Denver  
Stanford  
Lund  
Butler  
Brown  
Notre Dame  
Brisbane  
Sydney  
Kagoshima  
Nagoya  
Kyoto

Gifts to Japanese institutions, for instance, were prompted by our desire for information on Cyperaceae; to Vienna, on Lobeliaceae; to ~~Dr.~~ Sauv., on Piperaceae; to Göteborg, on Urticaceae, Thymelaeaceae, Goodeniaceae; to Chicago, on Compositae, etc.; to Munich, on Amaranthaceae, Myrtaceae; etc.

Yours sincerely,

*Sydney, or  
Alcarnae*



18328 Plummer Street  
Northridge, California  
May 20, 1958

Dear Dr. Degener:

Please excuse the informal paper. Things are a bit confused and over-busy here, and I'm running out of supplies.

Your request catches me at a difficult time, for we are preparing now to move to a new location in order more effectively to carry out the remainder of my work on the Mexican algae under the grant. I start teaching at UCLA on June 23, and have no end of things to do meanwhile. However, I am interested in the Canton Island algae to the extent that I am going to try to do the determinations for you. It is not necessary to consider that in doing this I am bettering my opportunities for travel and research in the Pacific, for, in effect, I would be giving up an opportunity to go to Palmyra Island in exchange for a chance to study your collection. You see, already this month I have turned down an expedition to Clipperton Island, have received an invitation to go to Palmyra today, and Friday an invitation to cruise the Norwegian fjords. All these are not only expense-paid, but on part salary. You see, there are just too few algologists.

Well, the fact is, to try to work in your material I would like to have it so prepared that I can go right to the meat of identification without having to do any duratorial work. Accordingly, if you will please sort all the material to entities, drying the coarser specimens and keeping portions of all the more delicate forms in liquid (dilute formalin or 7% alcohol). Some of the coarser things may have small epiphytes, so you will want to watch for these as you sort. If you ~~will~~ wish to retain specimens for yourself or for distribution, kindly make up what you wish. You need send me only one good example of each to retain here along with a portion in liquid if such is made up. I would like the specimens accompanied by regular labels that can be used on herbarium sheets, and each specimen so numbered that it can accurately be reported back to you. Kindly put small locality labels in the vials also, and have these bear the appropriate corresponding collection numbers.

I may be able to do this identification work on Los Angeles County time, in which event they will want the specimens and will expect the publication of the determination to appear in such a way under my name that separates could be obtained.

I'm not sure just what you may mean by a "reasonable length of time" to complete these, but you can be sure I don't let grass grow under my feet, and that once the material is before me they will somehow get examined.

I checked into my Mexican collections and roughly estimate that between six and seven thousand field collections will have to be studied. This is an awful prospect!

I trust all these things can still be done so as to permit me to take some kind of trip this summer.

Best regards,

*E. Yale Dawson*

P.S. I hope you didn't collect crustose coralline algae. I can't attempt to name these however important they may be.

## CHICAGO NATURAL HISTORY MUSEUM

FORMERLY FIELD MUSEUM OF NATURAL HISTORY  
ROOSEVELT ROAD AND LAKE SHORE DRIVE

CHICAGO 5, ILLINOIS 8 May 1958

Dear Dr. Degener:

I am sorry to have put off an answer to your letter of March 27th for so long. I have had so much work at hand that it seemed best to wait until I could send you the list of determinations inclosed here. I may not have time for a careful study of your no. 24582, which may be new, for some time, but I shall eventually get on it. I hope before long to make up the duplicates of your specimens and send sets as you have indicated. The preservation turned out to be far more satisfactory than I had anticipated; next time I might suggest that you dry the material <sup>thoroughly first</sup> and then add the formaldehyde. There are some species of Oscillatoria and Phormidium which might thus be preserved which did not survive in the present lot, especially in those from aquatic habitats. I am highly pleased with the whole collection and want to thank and congratulate you and Mrs. Degener for your efforts.

I deeply appreciate your kindness and interest in my own situation here. You had indeed a difficult time yourself with your botanical career there, and it is wonderful what you have accomplished in spite of hell and high water. I trust, however, that neither of us will be too handicapped by psychoses or physical debilities because of our experiences; if we didn't end up with those that we have, we'd end up with others just as positive or negative. And perhaps neither of us would have much ~~at stake~~ <sup>to say</sup> for ourselves if we hadn't challenged autocracy and institutionalism as we have.

CHICAGO NATURAL HISTORY MUSEUM, CHICAGO 5, ILLINOIS, U.S.A.  
ADDRESS ALL CORRESPONDENCE TO THIS ADDRESS

However, you will be interested to know that all my efforts during the past five years have been directed toward directing myself of all responsibilities here so that I can leave. This matter ~~is~~ of going elsewhere is being worked on right now, and it is hoped that I can let you know the good news in a short time. Meanwhile, I shall appreciate your keeping these remarks confidential.

With all best wishes and regards, and hoping that the future will be more of a satisfaction to all of us than the past has been,

Sincerely,

Francis Drouce

1616 east 50th place, Chicago 15

24564. *Entophysalis deusta* (Menegh.) Dr. & Daily  
 24565. *Lyngbya aestuarii* (Mert.) Liebm. and *Anacystis dimidiata* (Kütz.) Dr. & Daily  
 24567. *Schizothrix longiarticulata* Gardn. and some *Scytonema Hofmannii* Ag.  
 24568. *Entophysalis deusta* (Menegh.) Dr. & Daily  
 24571. *Anacystis montana* (Lightf.) Dr. & Daily  
 24572. *Scytonema Hofmannii* Ag. and some *Microcoleus chthonoplastes* (Fl. Dan.) Thur.  
 24573. *Entophysalis deusta* (Menegh.) Dr. & Daily, *Johannesbaptistia pellucida* (Dick.) W. R. Taylor & Dr., *Anacystis dimidiata* (Kütz.) Dr. & Daily, and *Plectonema terebrans* Born. & Flah.  
 24574. *Schizothrix Cresswellii* Harv.  
 24575. *Lyngbya semiplena* (Ag.) J. Ag.  
 24576. *Hydrocoleum glutinosum* (Ag.) Gom. and some *H. comoides* (Harv.) Gom.  
 24577. *Lyngbya aestuarii* (Mert.) Liebm.  
 24578. *Hydrocoleum glutinosum* (Ag.) Gom.  
 24579. *Microcoleus acutissimus* Gardn. and *Schizothrix longiarticulata* Gardn.  
 24580 (Canton id.). *Scytonema Hofmannii* Ag. and *Schizothrix Heufleri* Grun.  
 24580 (Johnston island). *Entophysalis deusta* (Menegh.) Dr. & Daily and *Microcoleus chthonoplastes* (Fl. Dan.) Thur.  
 24581. *Microcoleus chthonoplastes* (Fl. Dan.) Thur. Part of this I've separated as 24581a = *Calothrix crustacea* Thur. and *Entophysalis deusta* (Menegh.) Dr. & Daily  
 24582. Provisionally labeled *Schizothrix Taylorii* Dr.; further study may prove that it's new!  
 24583. *Lyngbya aestuarii* (Mert.) Liebm. and *Entophysalis deusta* (Menegh.) Dr. & Daily  
 24584. *Anacystis dimidiata* (Kütz.) Dr. & Daily and *Entophysalis deusta* (Menegh.) Dr. & Daily  
 24585. *Calothrix crustacea* Thur., *Schizothrix longiarticulata* Gardn., and *Entophysalis deusta* (Menegh.) Dr. & Daily  
 24592. *Lyngbya aestuarii* (Mert.) Liebm. and *Phormidium Gardnerianum* Dr.  
 24593. *Entophysalis deusta* (Menegh.) Dr. & Daily with bacteria and decaying plants & animals  
 24594. *Entophysalis deusta* (Menegh.) Dr. & Daily  
 24595. *Microcoleus tenerimus* Gom., *Plectonema terebrans* Born. & Flah., *Entophysalis deusta* (Menegh.) Dr. & Daily, and some *Calothrix crustacea* Thur.  
 24596. *Schizothrix Taylorii* Dr., *S. longiarticulata* Gardn., and *Scytonema Hofmannii* Ag.  
 24597. *Microcoleus chthonoplastes* (Fl. Dan.) Thur. and *Entophysalis deusta* (Menegh.) Dr. & Daily  
 24598. *Schizothrix Lamyi* Gom., *Porphyrosiphon fuscus* Gom., and *Entophysalis deusta* (Menegh.) Dr. & Daily  
 24599. *Phormidium papyraceum* (Ag.) Gom., *Nodularia sphaerocarpa* Born. & Flah., and *Plectonema Nostocorum* Born.  
 24600. *Nostoc calcicola* Bréb. and *Schizothrix Heufleri* Grun.



Waialua, Oahu, Hawaii.  
May 23, 1958.

Dear Dr. Drouet:

Mrs. Degener and I are delighted with your determinations. It is lucky you advised us how to collect. I wonder whether these blue-greens are not scattered in great frequency from one atoll to another via the plover & other migratory birds. I imagine these more or less terrestrial species would be killed by ocean water. Overgrown & sealed knotholes might account for some transport over ocean distances for salt-sensitive plants and animals such as worms and land mollusks, but I guess VERY rarely. Most islands are so old that the time element, however, is ample enough for such VERY rare occurrence in a sense to occur geologically very often.

Perhaps regarding 24582 I should merely list it as *Schizothrix taylorii* Dr., with a question mark in the Atoll Res. Bull. Hold on to ALL material until you have completed your study at your leisure, and there will then be no chance of getting snarled up by having two work on the same plant. Ray Fosberg never has novelties or new combinations published in his bulletin as he considers the paper stock too ephemeral. That is a rather broad-minded attitude to take about one's own child.

We shall be fascinated to see the set for the Bishop Museum as then we can visualize (from reading our labels) just where we collected each number.

We are greatly impressed by the sand-binding qualities of these blue-greens UNTIL the ground is so parched that the mats exfoliate to expose the loose sand beneath. Only then has the wind a chance to move it.

Perhaps if you applied for a three year grant-in-aid from the National Science Foundation with a three-year renewal when the first grant has expired, the six years would allow the murky Lake Michigan waters to clear. I am now applying for my second three year grant to continue the Flora Hawaiiensis, a project which increasing printing costs was slowly killing.

Sincerely,

Otto Degener

## CHICAGO NATURAL HISTORY MUSEUM

FORMERLY FIELD MUSEUM OF NATURAL HISTORY  
ROOSEVELT ROAD AND LAKE SHORE DRIVE  
CHICAGO 5, ILLINOIS

31 May 1958

Dear Dr. Degener:

Thank you for yours of the 23rd. I have now finished preparing the sets of your Canton island collections, though I should be able to get them packed and sent off to you before next week-end. I was able to make a thorough study of the material reported to you as Schizothrix Taylorii and am sorry to say that I could find nothing that a finger could be laid on to distinguish these collections from that species — though I have the feeling that when other collections of the same thing turn up from the Pacific islands, distinctions may become apparent.

I am glad that you are appreciation of the numerous species which were represented in these collections. Probably others will turn up in future collecting there. Most of them appear to be able to grow when periodically washed by salt water, although I suppose that the frequent rains leach out the salt quickly. The birds must surely be responsible for the transportation of the land and fresh-water species. On the other hand, such typically salt-water species as Entopneustes deresta and Calothrix scopulorum appear to adapt themselves easily to fresh-water situations on these low islands. Mr. Jan Newhouse was engaged in a study of just how these marine species changed in structure in such

ADDRESS ALL CORRESPONDENCE, PUBLICATIONS, AND PACKAGES TO  
CHICAGO NATURAL HISTORY MUSEUM, CHICAGO 5, ILLINOIS, U.S.A.

fresh-water habitats, but his work has been interrupted  
by working with sugar-cane recently.

I am very definitely keeping in mind a grant  
from the NSF for the future. At this time, though,  
I am in the midst of negotiations that might  
prove more satisfactory. I'll let you know of  
them if they turn out as I hope. Meanwhile, I  
am only hoping to remain employed here until  
I get ready to go.

With all very best regards and wishes, and  
trusting that the specimens will eventually reach  
you,

Sincerely,

Francis Drouin

1616 east 50th place, Chicago 15

I have your earlier letter with home address before me; the other, with precise instructions, is beyond reach in the Museum 35 miles distant.

Some of the smaller carollines are going to you, and a few blue-greens may leak through. On their return I can mail them for determination to Drouet and elsewhere.

We are still working on more of our catch; specimens should follow shortly. We are really experimenting with these plastic vials. They are not too good with alcohol, but I doubt that formalin would dry them and make them in time brittle.

We appreciate your kindness in taking over the Canton material.

Sincerely,

Waihalua, Oahu, Hawaii.  
June 25, 1958.

Dear Prof. Dawson:

We were delayed in mailing you the algae due to McKesson & Robbins by 'phone agreeing to mail me vials of a certain size and then, without any notice whatsoever, ignoring me because they happened to lack that size. I finally "woke up" and then ordered a gross of a larger one. Another delay of ours is a business one. We are professional loafers or unemployed and hence depend on our daily fish and poi on a few rental units. Two service families are suddenly transferred and vacating our houses, and thus we are head over heels getting them ready for the next occupants. We cannot delay such work as every day lost means loss in a day's rent. Such upheaval comes about once a year.

We are mailing two packages of algae to you today. We have retained duplicate material and labels. Please return the discarded material to us, at our expense. There is of course a chance that some of the material you have from us is sterile, while the dups., are not. Had we not this rental trouble, our assorting of material would be a bit better.

I believe I wrote we had returned from Canton with about 50 numbers in polyethylene bags. But now that Mrs. Degener & I are assorting our catch and putting it into vials, we find we have many more numbers. There is of course lots of duplication - material you at once can place aside. Some may be of interest, indicating whether a species grows along the ocean as well as in the lagoon.

Even though much material will prove poor and some worthless, we prefer <sup>numbers</sup> to discard. I shall then be sure what labels to discard or rather assign



UNIVERSITY OF NEW HAMPSHIRE  
DURHAM NEW HAMPSHIRE

COLLEGE OF LIBERAL ARTS  
Department of Zoology

July 5, 1958

Dr. Otto Degener  
P. O. Box 187  
Waialua, Oahu  
Territory of Hawaii

Dear Dr. Degener:

You were most kind to send us an autographed copy of your delightful account of a NATURALIST'S SOUTH PACIFIC EXPEDITION: FIJI, and we are happy to have it in our library. You must have had a wonderful experience aboard the Cheng Ho, and we can only envy you the opportunity to explore in the South Pacific.

Our own expeditions have all been in this hemisphere and, so far, north of the Equator. But we have come to love the tropics and feel very much at home there. One reason we enjoyed reviewing the fifth part of Flora Hawaiiensis was the broad distribution of so many of the plants, and your intriguing little notes added to the technical descriptions.

Thanks very much for your thoughtfulness.

Cordially yours,

*The Milnes*

Lorus J. and Margery Milne.

Mokuleia Beach, Waiialua, Oahu, T.B.  
July 8, 1958.

Dear Dr. Dawson:

We returned from Honolulu from our rental unit painting, termite-proofing and screen-repairing to find your July 2 letter awaiting us.

We mailed you three tins of Canton algae in all, the last rather recently. To save postage, we did drain the vials more or less to the limit.

Don't be at all upset about not completing your determinations in a rush. Frankly Mrs. Degener & I are upset that we did not clean the material better for your studies. But we are still head over heels with rental units. We lost two tenants July 1.

I wish you would have your library get you the Atoll Research Bulletin (Nos. 41 - 46), August 15, 1955. It is issued by the Pacific Science Board, Nat. Acad. Sciences, Nat. Res. Council, Washington, D.C. Here I & E. Gillaspay wrote a 50-page article about "Canton Island, South Pacific;" my friend R.H. Van Zwaluwenburg, "The insects and certain other arthropods of Canton," stimulated by my 1950-51 finds; and my assistant Bill Hatheway, "The natural vegetation of Canton Island, an equatorial Pacific atoll." With these bulletins before you (including a map of the atoll, with I fear the scale not correct), you can better visualize the entire project.

As you know, Mrs. Degener & I are merely the collectors of the Canton algae. It will not be so nice for us but more just for you if you take over the true algae, actually in a separate Bulletin of the series, to be printed at the same time by you alone. It would be proper for you to have a short introductory paragraph stating the Degeners collected the material and perhaps worth while to cite labels of critical species in toto. The one nasty fly in the ointment is the refusal of editor Ray Fosberg to publish novelties in his Atoll Research Bulletins. He considers his own publication too ephemeral, a rather unusual and broad-minded attitude. Should we Degeners have picked up half a dozen novelties or so, why not mention them merely as "Halimeda sp.," for example, with note that they will be named and described technically elsewhere?

Whether you publish your own bulletin in Fosberg's periodical or whether you give us your list of determinations and we publish them along with our own ms., you would get a score or so reprints free. Additional ones, as they are but mimeographed, can be purchased for such a nominal sum that it is immaterial to us whether we do so for you or you do so yourself.

We made no dried specimens, excepting for a few calcareous genera, By the way, who specializes on them?

We do not care where the material is deposited. We should like to know your final decision so we can mention it in our article. Remember, we have duplicates galore of most of your numbers. As Mrs. Degener and I were guests of CAA, a government agency, we feel it only proper to deposit the first set of duplicates at the U.S.Nat.Mus. Others would go to N.Y.B.G., Bishop Museum, Univ. of Mass. (my alma mater), Berlin-Dahlem (where I "discovered" Mrs. Degener), and elsewhere.

Out of a clear sky a few days ago came a gratifying proposition that may involve you: When we were on Canton last February collecting mollusks for our paper, we got to know a Mr. & Mrs. Albert Lincoln. He is part-Hawaiian, employed in the Power House; she is American of Korean ancestry. They are amateur conchologists, and when we learned what they had accomplished in their hobby - Mrs. Lincoln had invested in up-to-date texts like Tucker Abbott's - we turned over the shell project to them, suggesting they publish a bull., under their own names. Now we received a letter from the Lincolns, inviting us to be their house-guests on Canton for a week - there are no hotels. Naturally, we cannot afford a round-trip 'plane passage. Should, however, the monthly CAA 'plane have two vacancies

we may get the chance to do a little more collecting. As algae are seasonal in so many cases, we may pick up additional interesting material for you, at least old ones in other stages of growth. Please, remember, this new Canton "trip" is still in the pipe-dream stage.

Mr. Lincoln is a nice young man, once a cowboy on the Parker Ranch on Hawaii, and actually related to the former president Lincoln. Mrs. Lincoln was hostess for a group of better restaurants until her health failed. He is the collector and diver (among horrible sharks!!!!); she, the student. They have a fine collection of phonograph records, and appreciate good music. Not being Caucasian, they are a bit snubbed by other residents far below them in personality and culture. We spent so much of our time pleasantly with them and perhaps, by osmosis, lost in popularity in the eyes of the more conservative, racially conscious "whites." Canton, you will remember, is half British.

If I write more, you will never have time to get your day's work done.

Aloha,

# SCIENCE

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE  
1515 MASSACHUSETTS AVENUE, NW, WASHINGTON 5, D.C. • DUPONT 7-7171

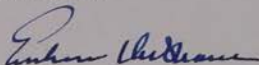
15 July 1958

Dr. Otto Degener  
Waialua  
Oahu, Hawaii

Dear Dr. Degener:

Unfortunately, we are unable to make available twenty  
tear sheets of the review of your book, Flora Hawaiiensis.  
We could, however, supply twenty copies of that issue of  
Science at 30 cents each. Please let me know your wishes.

Sincerely,



Graham DuShane  
Editor

GDuS:lg

3.30 for  
10 copies  
7/20/58



1616 east 50th place, Chicago 15  
16 July 1958

Dear Dr. Degener:

Thank you for your letter of the 12th. I am glad that the package of specimens arrived safely and that you were pleased with them. There is in any way you can avoid duplicating some of the species in future collecting unless you examine each microscopically - and that is impractical. Maybe it's as well to try to collect at other stations than you visited the last time. It is very good to hear that you may go back to Canton.

Your adventure with the threatened tidal wave sounds exciting - and onerous. Here is hoping that you have all the heavy work done now and are looking back at it with satisfaction.

Your package of odds and ends of microscopic algae I hope you will address to me at the home (not the museum) address. The museum has been so insufferable recently that I hope to be away from it permanently very soon. As soon as possible I shall let you know the new address, where I am assured that every encouragement will be given for botanical work in the future. This of course is confidential. I hope, however, you will keep me informed of your addresses while traveling. This home address will remain my permanent address for some years, and letters ~~with~~ and packages will be forwarded at once. But I'll give you the new address for work as soon as possible.

With all best regards and wishes to you both,

Sincerely,  
Francis Drouin

UNITED STATES DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE  
State Office

Ross Building  
209 S. W. 5th Avenue  
Portland 4, Oregon

July 22, 1958

Mr. Otto Degener  
Mokuleia Beach  
Waialua, Oahu  
Hawaii

Dear Mr. Degener:

I am interested in getting a copy of your book "Flora  
Hawaiiensis, or New Illustrated Flora of the Hawaiian  
Islands," which is listed in the March 1958 issue of  
Biological Abstracts.

I would appreciate your letting me know whether copies  
are available and what the charges are.

Very truly yours,

  
Robert L. Brown  
Deputy State Conservationist

Waialae, Oahu, Hawaii.  
July 28, 1958.

Dr. William C. Steere,  
N.Y. Botanical Garden,  
Brenx Park, N.Y. 59, N.Y.

Dear Dr. Steere:

Mrs. Degener and I a few evenings ago attended Dr. Graf's lecture about axis deer.

It appears to us that the hunting fraternity in the Islands is trying to convince the public that deer will be an asset to the Island of Hawaii. The next move will be their actual introduction.

Believing the Garden would oppose the policy of introducing exotic herbivores in an area where 98% of the native vegetation is endemic, I took the liberty of signing myself at the meeting as connected with the N.Y. Botanical Garden. I hope you do not disapprove.

Leading conservationists as well as the National Park Service have for years opposed this folly.

In a few days Mrs. Degener and I will have another NSF fascicle about local plants off the press. When I receive the bill, I shall mail it to you with my NSF statement for the past six months. This should save duplication of effort on the Garden's part.

Yours sincerely,

C  
O  
P  
Y

NATIONAL SCIENCE FOUNDATION  
WASHINGTON 25, D. C.

July 31, 1958

Dr. William C. Steere  
New York Botanical Garden  
Bronx Park  
New York 58, New York

Dear Bill:

Your letter of July 17 asking that the overhead on Degener's proposal be increased from ten percent to fifteen percent is at hand. Of course, we are quite in sympathy with this request and I shall be glad if you can influence Degener's determination in such matters. As a result of your letter I am making the desired recommendation and this will be reflected in a slightly increased grant.

With best regards,

Sincerely yours,

A. C. Smith  
Program Director  
for Systematic Biology



Waialua, Oahu, Hawaii.  
August 1, 1958.

Dr. A.C. Smith,  
National Science Foundation,  
Washington 25, D.C.

Dear Dr. Smith:

I herewith transmit six copies of a fascicle of illustrated sheets for Book 6 of the "Flora Hawaiiensis." It is a partial result of Grant No. G-2216. It was published yesterday, with about 50 copies in the mails to interested individuals and institutions. Some more shall be mailed within the next few days.

We are rather excited about having found a good quantity of a species of Wahlenbergia on the drier slopes of Molekai at about 1,500 feet elevation. The species resembles Linaria canadensis superficially. We wonder whether it could be native; or is it just a disappointing, naturalized weed!

Though a bit outside Dr. Wimmer's field, we plan sending him Wahlenbergia material for his artist to draw. Then we can print this find in Book 6.

Sincerely,

Waialua, Oahu, Hawaii  
April



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TO

Dr. Otto Degener  
Waialua, Oahu

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DATE August 1, 1958

CUSTOMER'S  
ORDER No. 63941

OUR  
ORDER NO.

SHIPPED  
VIA

TERMS: 30 DAYS NET

SOLD BY

QUANTITY	DESCRIPTION		UNIT PRICE	AMOUNT	TOTAL
16	Lots Flora Hawaiiensis				
	Family	140	Papaveraceae.....	47.62	
	"	319	Scrophulariaceae.....	20.70	
	"	319	Scrophulariaceae.....	45.17	
	"	319	Scrophulariaceae.....	34.25	
	"	17b	Aspidiaceae.....	44.92	
	"	339	Lobeliaceae.....	43.92	
	"	339	Lobeliaceae.....	47.62	
	"	339	Lobeliaceae.....	51.28	
	"	302	Loganiaceae.....	51.53	
	"	300	Oleaceae.....	34.25	
	"	319	Scrophulariaceae.....	33.12	
	"	339	Lobeliaceae.....	45.17	
	"	155	Saxifragaceae.....	44.92	
	"	30	Taxodiaceae.....	47.37	
	"	47	Gramineae.....	45.17	
	"	269	Rhizophoraceae.....	47.62	
					684.63

PAID  
496.27  
AUG 4 1958

PARADISE OF THE PACIFIC, LTD.  
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Publishers of "PARADISE OF THE PACIFIC" • Hawaii's Foremost Monthly Magazine

DR. OTTO DEGENER  
DR. ISA DEGENER  
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1213

WAILUA, HAWAII,

August 4 1958

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building fee  
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Dr. Otto Degener



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	"	339 Lobeliaceae.....	43.92		
	"	339 Lobeliaceae.....	47.62		
	"	339 Lobeliaceae.....	51.28		
	"	302 Loganiaceae.....	51.53		
	"	300 Oleaceae.....	34.25		
	"	319 Scrophulariaceae.....	33.12		
	"	339 Lobeliaceae.....	45.17		
	"	155 Saxifragaceae.....	44.92		
	"	30 Taxodiaceae.....	47.37		
	"	47 Gramineae.....	45.17		
	"	269 Rhizophoraceae.....	47.62		
					684.63

Publishers of "PARADISE OF THE PACIFIC" • Hawaii's Foremost Monthly Magazine



## BEAUDETTE FOUNDATION

*For Biological Research*

R.F.D. 1, BOX 228 - SOLVANG, CALIFORNIA

August 4, 1958

Dr. Otto Degener  
Mokuleia Beach  
Waialua, Oahu, T. H.

Dear Dr. Degener:

This will let you know that we have arrived in Solvang and are getting organized to continue the algae studies. I think all of your Canton Island material has arrived and as soon as I have opportunity I will begin to study it.

With regard to the possibility of <sup>new</sup> ~~mono~~ species I would say that it is unlikely that we would find more than a few, perhaps none. For the pan-tropical distribution of the algae such as you may have found on Canton Island probably means that they will have been reported from other central Pacific Islands. If we do find new things I would prefer publishing them in a journal such as Pacific Science.

You will hear more from me as the work progresses.

Cordially yours,

*E. Yale Dawson*

E. Yale Dawson

EYD:H

PLEASE DETACH UPPER PORTION AND RETURN WITH REMITTANCE

DATE	REFERENCE No.	INVOICE No.	CHARGES	CREDITS	BALANCE
			BALANCE FORWARD <del>50</del>		
AUG 4 58	63941	320.68	684.63		684.63 *
AUG 5 58	68.86			496.27	188.36 *
AUG 8 58	64295	321.28	83.98		272.34 *

*Pd. sept. 9. BB*

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DIRECTOR  
WILLIAM C. STEERE

August 4, 1958

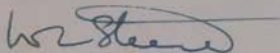
Dr. Otto Degener  
68617 Crozier Drive  
Waialua, Oahu, Hawaii

Dear Dr. Degener:

Thank you very much for your interesting letter of July 23th and for the material that you included. I think that your attempt to keep exotic herbivores out of an area of high endemism is an excellent one, as I have seen the terrible damage wreaked by goats in Puerto Rico and other tropical American areas. I hope that you are successful in your campaign, although unfortunately hunters and fishermen always seem to outnumber the conservation-minded naturalists.

We will be looking forward to receiving your National Science Foundation report for the past six months when you have it finished.

Sincerely yours,



William C. Steere  
Director

WCS/gd

5 Aug. 1958

Dear Dr. Degener:

Thanks for yours of the 1st. It is very nice to be here and away from that foul museum. I am delighted with the town, 15,000 people, and metropolitan as only western cow towns can be. The university is not large, but the buildings are all new, well-equipped and fireproof. I have finally got the library and herbarium unpacked and so can start work again very soon in earnest. Dr. (Mrs.) Shields, the head of the department, is interested in the physiology of soil algae. My work will be mainly to be myself and do botany as I am accustomed to doing it, with much encouragement, and when necessary act as consultant about the soil algae projects. If I want to offer courses, I can; if not, it's O.K. The weather is cool, since the town is at an elevation of 6400 ft.

I'll be glad to see your latest collections from Molokai when they come; if there is anything to interest a lichenologist in them, I'll send it to Dr. H.A. Imshang at Mich. State Univ., East Lansing.

Yes, I think that you can safely say that the color of the rocks on Canton island is due to *Eutrophyalis densa* and whatever other blue-green algae predominate on these rocks. I have seen no evidence that the color is due to mineral substances.

With all best wishes to you and Mrs. Degener and assuring you that I am not in the least sorry to have left Chicago,

Sincerely,

Francis Brown



Waialua, Oahu, Hawaii.  
Aug. 5, 1958.

Dear Dr. Steere and Dr. Keck:

I herewith submit the last fascicle of the *Flora Hawaiiensis*, with prices for each sheet appended. These sheets are not punched nor trimmed as the result is better if all are trimmed at one time, namely at completion of Book 6.

Below is my accounting of National Science Foundation funds, involving Research Grant G2216, from January 1, 1958 to July 31:

Printing - - - - -	\$ 1,437.94
Car	
(painting, license plates, repair) - - - - -	272.03
(gas. & oil) - - - - -	74.56
Drawings (major) - - - - -	200.50
Postage	
(total is \$237.75; but of this, part is personal and business mail - to simplify matters I am personally absorbing two-thirds of charges even though NSF postage was huge due to plant packages and Floras mailed gratis to interested institutions and individuals, correspondence, etc.)	79.24
Red Purse - - - - -	38.01
Travel - - - - -	35.20
Insurance - - - - -	8.00
	<hr/>
	Total \$ 2,145.49
On hand Jan. 1, 1958 - - - - -	\$ 515.26
Feb. 1, 1958, NSF cheque - - - - -	916.00
March 24, 1958, NSF cheque - - - - -	1,160.30
Total from NSF - - - - -	<hr/> \$ 2,591.76
Jan. 1 - July 31, 1958, expenses - - - - -	2,145.49
On hand - - - - -	<hr/> 446.27
Rental refund - - - - -	50.00
Total on hand - - - - -	<hr/> \$ 496.27

The August 1 printing bill No. 32066 from Paradise of the Pacific, Ltd., comes to \$684.63. I am paying the firm \$496.27 on account, and hence owe them the sum of \$188.36.

At the proper time, please mail me the final sum allocated by NSF for our project G2216.

Respectfully submitted,

Collaborator in Hawaiian Botany

NATIONAL SCIENCE FOUNDATION  
WASHINGTON 25, D. C.

August 7, 1958

Dr. Otto Degener  
68617 Crozier Drive, Waialua  
Oahu, Hawaii

Dear Otto:

I have scanned with much interest the pages of your "Flora  
Hawaiiensis" of which you sent six reprints on August 1. I am very  
glad to see what excellent progress you are making on Book 6. It  
will be interesting to learn Dr. Wimmer's opinion of the plant from  
Molokai which you think may represent Wahlenbergia.

On a recent visit to Massachusetts I had a chance to see the  
kodachromes which my sister took in Hawaii. She certainly covered  
a great deal of territory in a few weeks, and I am certain that the  
trip was much more pleasant because of the advice you gave her about  
the various islands.

With best regards,

Cordially yours,



A. C. Smith  
Program Director for  
Systematic Biology



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SOLD  
TO

Dr. Otto Degener  
Waialua, Oahu

DATE August 8, 1958

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ORDER NO.

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TERMS: 30 DAYS NET

SOLD BY

QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT	TOTAL
2 lots	Flora Hawaiiensis			
	Family Oleaceae - 300		45.17	
	Family Papaveraceae - 140		<u>38.81</u>	
				83.98

PUBLISHERS OF "PARADISE OF THE PACIFIC" • HAWAII'S FOREMOST MONTHLY MAGAZINE

Waialua, Oahu, Hawaii.  
August 8, 1958.

Dr. A.C. Smith,  
National Science Foundation,  
Washington 25, D.C.

Dear Dr. Smith:

I herewith submit six sets of two more sheets for Book 6 of the "Flora Hawaiiensis," a partial result of Grant No. G-2216. Publication date, as usual, is given at the bottom of each sheet.

These four pages are actually an "overflow" from the printer's form published July 31.

Mrs. Degener and I enjoyed working on Argemone, and unearthing the little tidbit of information that the ancient Hawaiians actually cross-pollinated the plants to induce a better crop of seed!

Sincerely,



# SHIPPING NOTICE

New York Botanical Garden  
Bronx Park  
New York 58, N. Y.

Date August 11, 1958

To Mr. Otto Degener

68617 Crozier Drive

Waialua, Oahu, HAWAII

No. of Packages .....

Shipped by { Parcel post  
Express prepaid  
Freight collect

The New York Botanical Garden is sending you herbarium specimens as indicated below. Upon the arrival of the shipment, kindly verify its contents and *acknowledge by signing the blue sheet* and returning it to the Head Curator.

- X (1) Gift. received  
(2) Exchange.  
(3) For identification.  
(4) Return of borrowed material.  
(5) Loan no. .... Return is expected by prepaid express or parcel post before .....

Extension of this period may be granted on request to the Head Curator. The New York Botanical Garden will appreciate having every sheet of the loan annotated, and will be glad to receive a copy of the publication in which these specimens are mentioned. All material included in this loan must be returned at one time. Packing should be carefully done to avoid breakage of specimens.

The *pink duplicate sheet* is to be retained by the borrower as a record of the loan and is to be mailed under separate cover when the specimens are returned. The pink duplicate will be remailed to the borrower when the returned loan has been received and checked, indicating cancellation of the loan.

HEAD CURATOR.

## DESCRIPTION OF SPECIMENS

Received your kind donation of 27 specimens of Hawaiian plants for the herbarium.

Otto —  
Many thanks for the  
above & —  
Best regards to  
both of you.  
Mac.

Received the above in good order

All correspondence concerning the herbarium should be addressed to the Head Curator.

8/11/58 Frank MacGeever  
Date *Curator of the Herbarium* Signed

SMITHSONIAN INSTITUTION  
UNITED STATES NATIONAL MUSEUM  
WASHINGTON 25, D. C.

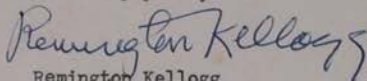
AUG 14 1958

Dr. Otto Degener  
Waialua, Oahu  
Hawaii

Dear Dr. Degener:

On behalf of the United States National Museum, I  
wish to thank you for the 149 specimens of Hawaiian plants  
which you recently sent to Dr. Swallen. The material has  
been accessioned as a gift from you.

Sincerely yours,



Remington Kellogg  
Director

THE NEW YORK BOTANICAL GARDEN

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FREDERICK S. MOSELEY, JR.  
DIRECTOR  
WILLIAM C. STEERE



August 25, 1958

Dr. Otto Degener  
68617 Crozier Drive  
Waialua, Oahu, Hawaii

Dear Dr. Degener:

I write to acknowledge receipt of your letters of August 5th and August 8th containing bills and an accounting of your grant. We shall be glad to keep these on file pending the time when we shall make a further report to the National Science Foundation.

Sincerely yours,

*H. de la Montagne*

H. de la Montagne  
Secretary

HM/gd

BEAUDETTE FOUNDATION

*For Biological Research*

R.F.D. 1, BOX 328 - SOLVANG, CALIFORNIA

September 4, 1958

Dear Dr. Degener:

I finished a couple of weeks ago the majority of the determinations of the Canton Island algae and sent the blue-greens to Dr. Drouet and the Codium species to Dr. Silva. Up to now I have heard nothing from either of them, but will probably have these determinations in hand before long and can finish up the annotated list of your collections.

Will you kindly send me one of the latest issues of the Atoll Research Bulletin as an example of format to follow in making up the list.

Best regards,

E. Yale Dawson



# THE NEW YORK BOTANICAL GARDEN STATEMENT OF ACCOUNT

INVOICE DATE

AMOUNT OF INVOICE

AMOUNT

ACCOUNT NO.

9/4/58

x

\$ 800.87

\$ 800.87

314

ENTERED CASH BOOK

APPROVED FOR PAYMENT

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THE NEW YORK BOTANICAL GARDEN  
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WILLIAM C. STEERE

September 4, 1958

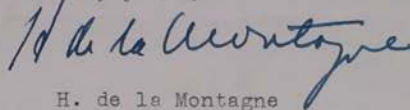
Dr. Otto Degener  
68617 Crozier Drive  
Waialua, Oahu, Hawaii

Dear Dr. Degener:

I enclose herewith check to your order  
in the amount of \$800.87. I find that we have a  
balance in your account of eighty-seven cents left  
over from some previous remittance and the \$800  
represent the final amount due on your grant which  
we have just received from the government.

With kind regards.

Sincerely yours,



H. de la Montagne  
Secretary

HM/gd

903½ East 60th Street  
Chicago 37, Illinois  
8 September 1958

[Mrs. Clay, daughter of Mrs.  
de Buscho by first  
marriage]

Dear Otto and Isa,

I was quite surprised to get your registered letter this morning. It actually arrived last Saturday morning, but I was in the library all morning, and Yolanda was at work, so the letter went back to the Post Office until I retrieved it this morning.

I hardly know what to say in answer to your question - for I know absolutely nothing about the matter. As far as I know, however, there are no assets. I am afraid that I am no help!!

[I chewed Horwinkle!]  
Yes, we had a wonderful trip to Central America. We went everywhere, since the ticket allowed it, even to Panama. We enjoyed the ride across the Isthmus - the jungle looked fascinating - but the climate is so uncomfortable - a poor collector would have a miserable time!

I spent a morning with Dr. Paul Standley. He is certainly a remarkable man - though his capacity at present is nil - he is in a hospital because of drinking too much I believe.

Now I am working full time at my dissertation - hope to have it finished for corrections by the 1st of October - and one never knows what the committee will suggest in the way of additions, etc. So we do not know at the present time just how long we will be in Chicago.

Best regards to you both, and aloha,

H. F.

[Horace Clay]

THE NEW YORK BOTANICAL GARDEN  
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WILLIAM C. STEERE

September 9, 1958

Dr. Otto Degener  
68617 Crozier Drive  
Waialua, Oahu, Hawaii

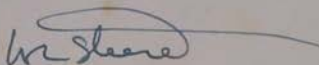
Dear Dr. Degener:

Thank you for forwarding to us Professor  
Senn's letter, which has gone to the herbarium.

Thank you, also, for enclosing a copy of  
your book "Naturalist's South Pacific Expedition:  
Fiji." I shall read this with a good deal of interest.

With reference to the four collections  
that are not properly recorded in Index Herbariorum,  
I shall forward this information to Dr. Lanjouw with  
a suggestion that they be included or emended in their  
next edition and will trust that in due time you and  
your work will be more correctly recorded.

Sincerely yours,



William C. Steere  
Director

WCS/gd



DR. OTTO DEGENER  
DR. ISA DEGENER  
68617 CROZIER DRIVE

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1958

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*Two hundred seventy two*  
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*100*  
DOLLARS

WAIALUA BRANCH  
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OF HAWAII

*Dr. Otto Degener*



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Dr. Otto Degener  
Waialua, Oahu

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Aug. 4, 1958	Inv. # 32068		684.63	
Aug. 5, 1958	CR # 6886 (Paid)		496.27	
			188.36	
Aug. 8, 1958	Inv. # 32128		83.98	
			272.34	
Sept. 9, 1958	CR # 6946 (Paid)		272.34	
No balance				

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Waialua, Oahu

DATE

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			272.34	
	Sept. 9, 1958 CR # 6946 (Paid)		<u>272.34</u>	
	No balance			

**PAID**

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NATIONAL SCIENCE FOUNDATION

WASHINGTON 25, D. C.

September 17, 1958

Dr. Otto Degener  
68617 Crozier Drive, Waialua  
Oahu, Hawaii

Dear Otto:

I know that you will be pleased to learn that the National Science Foundation has approved in principle your proposal entitled "Botanical Exploration of the Hawaiian Islands." The only change that will be necessary is that the Foundation has approved a maximum of \$15,700 for three years instead of the \$26,000 that you requested.

Before this grant can be made, however, we should appreciate having from you several items of specific information, as follows:

1. Would the grant of \$15,700 enable you to do the research that you have planned to do, and would this sum be acceptable to you, if granted?
2. Have you applied for or already received research funds from any other source for this same proposal?
3. If this grant were made, when would you wish it to become effective?

We would appreciate having this information just as soon as possible, as further processing of your grant cannot take place until we have the information requested.

Sincerely yours,



A. C. Smith  
Program Director for  
Systematic Biology (Acting)



C  
O  
P  
Y

NATIONAL SCIENCE FOUNDATION

WASHINGTON 25, D. C.

September 17, 1958

Dr. William C. Steere  
New York Botanical Garden  
Bronx Park  
New York 58, New York

Dear Bill:

From the enclosed copy of my letter to Dr. Degener, you will see that the Foundation is now in a position to make a grant of \$15,700 to the New York Botanical Garden for the continuation of his research. Pending a reply from Degener, I wonder if you would write me a brief note to indicate that this grant will be acceptable to the New York Botanical Garden.

As discussed in our earlier correspondence the grant will include an item of fifteen percent for indirect costs. It will be up to you to explain this situation to Degener as suggested in your letter of July 17. After the overhead has been deducted there will remain for his direct expenditures about \$13,650.

With best regards,

Sincerely yours,

A. C. Smith  
Program Director for  
Systematic Biology (Acting)

Waiialua, Oahu, Hawaii.  
Sept. 23, 1958.

Dr. A.C. Smith,  
National Science Foundation,  
Washington 25, D.C.

Dear Dr. Smith:

I have your Sept. 17 letter regarding my application for a grant-in-aid entitled "Botanical Exploration of the Hawaiian Islands," and herewith answer your three questions:

1. A grant of \$15,700 would enable me to conduct the research planned, provided I may allocate funds differently from the plan proposed by myself and Dr. David Keck of the New York Botanical Garden.

2. I have neither applied for nor received any research funds from any source for Haw. Bot. Exploration. Here I might add, however, that I shall add the limited funds gained from the sale of Book 5 of the "Flora Hawaiiensis," the result of a previous NSF grant, to help defray expenses of the new project.

3. Should the grant be allowed, I would wish it to become effective November 1, 1958.

I believe it should be my aim to try to complete Book 6 of the "Flora Hawaiiensis" during the coming three years, botanizing on various islands of the Hawaiian chain for pertinent material.

Yours sincerely,

*Dr. C. H. Eigenmann*

## BEAUDETTE FOUNDATION

*For Biological Research*

R.F.D. 1, BOX 228 - SOLVANG, CALIFORNIA

September 24, 1958

Dr. Otto Degener  
Waialua, Oahu, Hawaii

Dear Dr. Degener:

The last determinations of blue-green algae from Dr. Drouet came in today on your collection, and I learn from him that he has included these in a list sent to you. Accordingly, I will not treat them in my manuscript.

My trip to Palmyra Island is delayed a few more days, until Oct. 5, so it looks like I will have time to complete the manuscript on the Canton Island collection and have it ready for you in a few days. I may send it directly from here before I go, but I may call you by telephone in Honolulu to speak to you about it sometime during the day on October 7 (possibly the evening of Oct. 6). Will you please send me your telephone number and indicate where I can reach you that night or day? Perhaps I could even visit you for a little while if I could find some transportation from Hickam Field. We should be in early if we leave here at 8AM on the 6th.

I am writing this up as a separate paper representing the first contribution from our new laboratory here. I hope this will be all right with you, and I would like to indicate now an order for 150 extra copies over and above those that may be given free of charge.

Now, there is the possibility that we could have this little account printed here as the first number of a new serial we contemplate issuing from the Beaudette Foundation. Perhaps you would rather not do this on account of it being part of a larger Canton Island report. I guess it would be better to have them all appear together in the Atoll Research Bulletin.

I will plan to get all the specimens arranged for deposition in the Herbarium of the University of California, Berkeley. Perhaps I'll take them up there myself on the way to Honolulu and see that they are properly cared for. I used all your labels but two. Number 24848 turned out to be an animal, and number 24823 was worthless material. These I will discard.

Let me hear immediately whether we can get together.

Sincerely yours,

*E. Yale Dawson*  
E. Yale Dawson

NEW MEXICO HIGHLANDS UNIVERSITY  
LAS VEGAS

Dept. of Biology

24 Sept. 1958

Dear Dr. Degener:

My typewriter is off being repaired, so I am listing these in longhand, hoping that they will be readable. The specimens received through Dr. Dawson have an asterisk before them; one or more additional species turned up in them.

- \* 24569. *Lyngbya semiplena* (Ag.) J. Ag.
- 24727. *Hydrocoleum confluent* (Setch. & Gardn.) Dr.
- \* 24744. *Anacystis aeruginosa* (Zanard.) Dr. & Daily
- \* 24745. *Lyngbya infixa* Frémy on *L. majuscula* (Dillw.) Harv.
- \* 24749. *Lyngbya majuscula* (Dillw.) Harv.
- 24750. *Symploca hydroides* Kütz.
- 24753. *Spirulina subsalsa* Oerst. among other algae
- 24770. *Lyngbya confervoides* Ag. on an old coral
- \* 24772. *Symploca hydroides* Kütz.
- \* 24767. *Lyngbya confervoides* Ag.
- 24775. *Lyngbya semiplena* (Ag.) J. Ag.
- 24780. *Entophysalis deusta* (Menegh.) Dr. & Daily
- 24785. *Spirulina tenerrima* Kütz. and *Hydrocoleum lyngbyaceum* Kütz.
- \* 24827. *Lyngbya majuscula* (Dillw.) Harv.
- 24830. *Hydrocoleum comoides* (Harv.) Gom. and *H. glutinosum* (Ag.) Gom.
- \* 24835. *Lyngbya majuscula* (Dillw.) Harv.
- \* 24847. " " "
- \* 24858. *Lyngbya confervoides* Ag.
- 24878. *Calothrix parietina* (Näg.) Thur.
- 24888. *Scytonema Hofmannii* Ag., mostly parasitized by fungi
- 24889. *Plectonema Nostocorum* Born.
- 24892. *Palmogloea protuberans* (Sm. & Sow.) Kütz.
- 24896. " " "
- 24901. *Stigonema panniforme* (Ag.) Born. & Flah.
- 24902. *Scytonema Hofmannii* Ag.
- 24905. " " " and parasitized *Anacystis montana* (Lightf.) Dr. & Daily
- 24909. *Hydrocoleum glutinosum* (Ag.) Gom.
- 24910. *Schizothrix Cresswellii* Harv.
- 24911. *Calothrix parietina* (Näg.) Thur.
- 24912. *Entophysalis deusta* (Menegh.) Dr. & Daily and *Plectonema terebrans* Born. & Flah.
- 24915. *Plectonema terebrans* Born. & Flah.
- 24916. *Hydrocoleum lyngbyaceum* Kütz. and *H. glutinosum* (Ag.) Gom., chiefly
- 24917. *Lyngbya semiplena* (Ag.) J. Ag.
- 24918. *Hydrocoleum comoides* (Harv.) Gom.
- 24933. *Stichococcus subtilis* (Kütz.) Kierck.
- 24941. *Stigonema turfaceum* (Sm. & Sow.) Cooke and parasitized *Scytonema Hofmannii* Ag.
- 24959. *Microcoleus paludosus* (Kütz.) Gom.
- 24962. *Symploca muralis* Kütz. and *Plectonema Nostocorum* Born.
- 24963. *Trentepohlia lagenifera* (Hildebr.) Wille among moss *Plectonema*
- 24965. *Nostoc Muscorum* Ag. and *N. ellipso sporum* (Desmaz.) Rabenh., young plants
- 24966. *Microcoleus paludosus* (Kütz.) Gom.
- 24972. *Nostoc ellipso sporum* (Desmaz.) Rabenh.
- 24976. *Microcoleus rupicola* (Tild.) Dr.
- 24977. *Nostoc Muscorum* Ag.
- 24978. *Nostoc Muscorum* Ag.

(over)



I hope to mail duplicates of all these and at least the labels of the numbers received but not noted. You can depend on me to send to a specialist anything among other groups of cryptogams that might be determinable - and during the year, as the Chicago museum. I learned the hard way what mycologists, lichenologists, etc., will name. And I know good workers in all these groups who would be very disappointed if I didn't send them anything that is namable. In answer to your question as to when is an alga parasitized enough to become a lichen, I can say this: lichenologists will not be interested in anything that does not have the fruiting bodies of a lichen (which are fungi, of course), but then lichenologists are mycologists, after all. So, if something you collect is at all debatable, as seen with the naked eye, as to its being alga or lichen, you'd better send it to an algologist.

Thank you very much for all of these, and I hope that you and Mrs. Degener continue to preserve such algae as you find convenient to collect.

All goes well here, and I am enjoying the new place very much. I have tried to detect qualms of any sort about having left the Chicago museum, and find myself only glad. I miss all my friends there, but of course I'll be back to see them and they will come here. My herbarium is gradually being put in order here, and I hope that soon I'll be able to do research as I would always have liked to do it.

With all best regards and wishes,

Sincerely,  
Francis Drouet

## BEAUDETTE FOUNDATION

*For Biological Research*

R. F. D. 1, BOX 227 - SOLVANG, CALIFORNIA

September 25, 1958

Dr. Otto Degener  
Waialua  
Oahu, Hawaii

Dear Dr. Degener:

Inasmuch as so many other things are coming upon me just now I have decided to finish up the manuscript on your Canton Island algae and send it herewith. This was prompted by your letter and the copy of the Atoll Research Bulletin that came this morning.

To answer your questions: I think Dr. Drouet has sent you a list of the blue-green including those he named for me, so I give you only the numbers involved: 24569, 24744, 24745, 24749, 24767 (this may be in his list as 24769), 24772, 24827, 24835, 24847, 24858. Most of these were the dominant materials in each numbered vial.

Calcareous algae? Everyone has some of these needing determination. There are no specialists with time or knowledge of them. Dr. Johnson in Colorado knows the fossil ones, but hasn't ever made a section of a living species. I am trying to employ him for some \$1500 worth of work on mine, but it is a difficult matter. You are probably out of luck as the rest of us have been since Foslie died in Norway forty years ago.

I hope you find the manuscript satisfactory. I decided against any elaborate citation of the local data since the atoll is small and the collection of some 50 entities is not exhaustive (I would expect from what I found at Eniwetok Atoll that perhaps 200 species and varieties may ultimately be found at Canton).

Will you please fill in the title of your 1955 paper in the "Literature Cited" where I have left space for it?

Very truly yours,

*E. Yale Dawson*  
E. Yale Dawson

AMGUEDDFA GENEDLAETHOL CYMRU  
NATIONAL MUSEUM OF WALES

26th September, 1958

DEAR SIR,

I beg to acknowledge the receipt of your  
donation of

Degener, Otto. Naturalist's South Pacific  
Expedition: Fiji. Honolulu, 1949.

- Flora Hawaiiensis; or, The New illustrated  
flora of the Hawaiian Islands, 1934-38;  
and Book 5, 1946-57,

and to convey to you the best thanks of the Council for  
your acceptable gift.

I am, dear Sir,

Your obedient Servant,

B. Williams

Director.

Dr. Otto Degener,  
Waielua,  
Oahu,  
Hawaii.

Waiialua, Oahu, Hawaii.  
Sept. 27, 1958.

Dear Dr. Dawson:

Mrs. Degener & I are delighted to learn of your arrival on Oahu shortly. We live on the north shore about 30 miles from Honolulu. Our 'phone, listed in the book, is 235108.

We have a guest cottage - 2 small rooms, refrigerator & gas stove, tub with hot & cold water - in Honolulu about 3 minutes walk from the University and at the end of the Punahou-University bus line. The place is yours during your stay. All we need do is supply fresh linen for you.

When we work at the Museum usually two days per week, we stop over night in the cottage to save gas, & time otherwise needed to drive back & forth between Hon., and Waiialua. Presently, however, I am getting over a touch of the flu, and staying pretty well at home. As the cottage is going to waste, we hope you can make use of it.

Well, anyway, to save time in writing back and forth with not too many days to spare, I herewith enclose the key. All you need do is tell your taxi to drive you to 2351 Waiu Way ( a small street back of 2254 University Ave., Hon., the house we are renting to a Mr. & Mrs. Lawrence). The cottage lacks a 'phone, but I am sure the Lawrences would help you out in an emergency.

As Ray Fosberg does not publish novelties or new combinations in the Atoll Research Bulletin, should you have any in your Canton ms., perhaps you should publish under the new Beaudette Foundation serial. Otherwise, I imagine, publication in the Atoll Res. Bull., would be more practicable as a companion paper to our account of Canton Blue-Greens & Flowering Plants. Actually, we are not particularly interested where the paper appears PROVIDED it gets good normal distribution. Why not contact Fosberg and come to your final conclusion with him?

We are certainly grateful to you for cleaning up our Canton algal mess. A year or so hence we may try to take advantage of your kindness again, hoping you will publish a supplement to your present paper. We never know when we may get back to this fascinating atoll.

Sincerely,



BEAUDETTE FOUNDATION

*For Biological Research*

R.F.D. 1, BOX 228 - SOLVANG, CALIFORNIA

October 2, 1958

Dear Dr. Degener:

Many thanks for sending the key to your cottage. I most certainly will enjoy making use of it, but I learned yesterday that the Air Forces delayed our departure date again for one week. I hope that you will not be inconvenienced if I keep the key another week. This upsets my plans quite a bit, but there is nothing I can do about it.

I hope you will be quite well when I get over and that I may encounter you at the Museum, although it seems unlikely that I would have time to drive to Weisalus.

I suppose you have the manuscript by now.

Best regards,

*Yale Dawson*  
Yale Dawson

*Another change! Departure Oct. 10!  
Looks like a 3 day layover, so I'll most  
likely see you.*

OCT 6 1958

Dr. William C. Steere, Director  
New York Botanical Garden  
New York, New York

Research Grant NSF-G6377

Dear Dr. Steere:

I am pleased to inform you that the sum of \$15,700 is hereby granted by the National Science Foundation to the New York Botanical Garden, for the support of research entitled "Botanical Exploration of the Hawaiian Islands," under the direction of Otto Degen, Collaborator in Hawaiian Botany, for a period of approximately three years. Until further notice this grant will be paid as follows: \$6,200 on or about two weeks from date of this letter; \$5,200 on or about December 15, 1959; \$2,600 on or about December 15, 1960; and \$1,700 on or about June 15, 1961.

It is a condition of this grant that it may be revoked in whole or in part by the Foundation after consultation with the principal investigator and the grantee, except that a revocation shall not affect any commitment which, in the judgment of the Foundation and the grantee, had become firm prior to the effective date of the revocation; and that funds not committed by the grantee prior to the conclusion of the work contemplated under this grant shall be returned to the Foundation.

It is a further condition of this grant that disposition of patent and other rights in any inventions or discoveries made or conceived during the research shall be the responsibility of the grantee; that the grantee shall give the Foundation reasonable notice of application by the grantee or other person or institution for a foreign or domestic patent on any such invention or discovery; and that upon issue of any patent on any such invention or discovery, the patentee shall grant the Government an irrevocable, royalty-free, nonexclusive license for use of such invention or discovery for governmental purposes.

The Foundation desires that this grant be administered in general accordance with the Foundation's policies for research grants as stated in "Grants for Scientific Research," April 1955, and in conformity with the other understandings reached between the Foundation and the grantee relating to this grant.

Please acknowledge receipt at your earliest convenience.

Sincerely yours,

Alan T. Waterman  
Director

NATIONAL SCIENCE FOUNDATION  
WASHINGTON 25, D. C.

October 9, 1958

VIA AIR MAIL

Dr. Otto Degener  
68617 Crozier Drive  
Waiialua  
Oahu, Hawaii

Dear Doctor Degener:

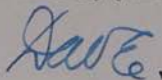
The Division of Biological and Medical Sciences is pleased to inform you that your research proposal, entitled "Botanical Exploration of the Hawaiian Islands," has been approved by the National Science Foundation for the sum of \$15,700 for a period of approximately three years. A copy of the grant statement is enclosed in order that you may acquaint yourself with the conditions.

Our policy with regard to reports on research supported by the Foundation is to keep them as simple as possible. We should like to have a short informal annual report (in duplicate) at the end of each calendar year and, at the expiration of the grant, a more comprehensive final report (in duplicate) of the progress of the research. These reports should contain, in addition to a description of the accomplishments achieved during the tenure of the grant, a chronological bibliography of all articles published under the grant. It is also desirable that the final report should include a listing of personnel, i.e., whether graduate student, technical assistant, professional associate, etc. If, in the course of the research, any unusually significant results are obtained, we should like to know about them as they occur.

We also request that six reprints of each publication resulting from work done under the grant be provided as soon as such reprints become available. An appropriate acknowledgment should be made in each publication; usually a simple footnote is adequate.

If you have any questions about these or other matters, please do not hesitate to write. We wish you continued success in your research program.

Sincerely yours,



David D. Keck  
Program Director for  
Systematic Biology

Enclosure

THE NEW YORK BOTANICAL GARDEN  
BRONX PARK  
NEW YORK 58, N. Y.

PRESIDENT  
CHARLES B. HARDING  
TREASURER  
BERKELEY GAYNOR

VICE-PRESIDENT  
FREDERICK S. MOSELEY, JR.  
DIRECTOR  
WILLIAM C. STEERE



October 9, 1958

Mr. Otto Degener  
Waialua  
Oahu, T. H.

Dear Otto,

Just a line to acknowledge your letter of September 19th which has been noted with interest and the receipted bill which we filed for future accounting with the N.S.F.

I note your comment on the islands as a nice place to retire to, and I would like nothing better, although I may have to settle for a trip which I hope to make sometime.

H de la M/bw

Sincerely yours,

*H de la Montagne*

H. de la Montagne  
Secretary



Waiulua, Oahu, Hawaii.  
Oct. 14, 1958.

Dear Dr. Steere, Dr. Keck and Mr. Montagne:

I have received letters from  
you severally regarding N.S.F.

Mrs. Degener and I wish to thank you for helping us win a renewal of the Haw. botanical grant. As I understand it, we are to continue pretty much as in the past regarding progress reports, samples of publications, and receipted bills.

Now that we have a guarantee that we can work on Haw. plants for another three years, we believe we are justified in purchasing a binocular dissecting scope to aid in our work. We had a miserable time with the drawing of seeds of, for example, Portulaca. We wish to avoid similar difficulty in the future.

By 'phone, as both of us presently have a touch of the "flu," we have enquired about a satisfactory instrument. One optical repair man offered us a second-hand Spencer instrument. If it does not meet our inspection, we shall purchase one of the cheaper new ones.

We had a nice visit Sunday here at the beach from Dr. Yale Dawson. He is on his way to Palmyra Island for collecting. He recently worked up our 50 or so preserved Canton Atoll material. He retained a set, and we have the remainder here at home. Our vials popped their corks in transit even though all were hermetically sealed in a cracker tin and hence (theoretically) not effected by air pressure during 'plane transit. Perhaps some plant inspector failed to tighten the lid again.

If Dr. Rogerson desires a set of the Canton material, please ask him to send us instructions. We lack screwcap vials here. Drugstores have gone "modern."

Thank you again for your kind help.

Sincerely,

*Ch. Degener*

DR. OTTO DEGENER  
DR. ISA DEGENER  
68617 CROZIER DRIVE

NO. 59-126  
1213

WAILUA, HAWAII

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OF HAWAII

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No cash*

*Dr. Otto Degener*

## Pacific Optical Company, Ltd.

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SCIENTIFIC INSTRUMENTS  
MICROSCOPES • BINOCULARS  
RIFLE SIGHTS • TELESCOPES  
CAMERAS (ALL TYPES) • PROJECTORS

IR-NO. 209 DATE Oct 27 1958M. Dr. Otto DegenerADDRESS Waialae, Oahu

CITY \_\_\_\_\_ PHONE \_\_\_\_\_

WILL CALL ☐ DELIVER ☐ DATE WANTED \_\_\_\_\_

AMOUNT	DESCRIPTION	TOTAL
	General overhauled	
	Microscope	47.50
	T.H. Tx	166
		<u>49.16</u>

RECEIVED BY \_\_\_\_\_

TERMS: 30 day net cash. Service charge after maturity  
at 1% per month on balance.

## Pacific Optical Company, Ltd.

40 NORTH KING STREET  
HONOLULU, HAWAII

## INSTRUMENT REPAIRING

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SCIENTIFIC INSTRUMENTS  
MICROSCOPES • BINOCULARS  
RIFLE SIGHTS • TELESCOPES  
CAMERAS (ALL TYPES) • PROJECTORS

IR-NO. 210 DATE Oct 27 1958M. Dr. Otto DegenerADDRESS Waialae, Oahu

CITY \_\_\_\_\_ PHONE \_\_\_\_\_

WILL CALL ☐ DELIVER ☐ DATE WANTED \_\_\_\_\_

AMOUNT	DESCRIPTION	TOTAL
	1 A.C. Optical Microscope	
	#133 Ser. 58 F	207.00
	T.H. Tx	725
		<u>214.35</u>

RECEIVED BY \_\_\_\_\_

TERMS: 30 day net cash. Service charge after maturity  
at 1% per month on balance.

Waialua, Oahu, Hawaii.  
Oct. 28, 1958.

Dear Mr. Montagne:

On our second grant from NSF we receive about ten days from now \$6,200. Naturally Isa and I won't come to the end of this sum for a year or two, and hate to see such capital idle.

We should like much of this sum invested in short-term U.S. Treasury Certificates (or some equivalent), the interest accruing to the grant. Is that proper? Should the Garden attend to such a purchase or we? Please give us your advice. The \$13,0700 is a wonderful sum to aid in our researches, but it is by no means all the cash we can profitably use.

We have had so much difficulty in trying to make out the structures of seeds and small flowers that we today purchased a "Cycloptic microscope", and had our regular microscope repaired. The cycloptic instrument magnifies about 15 times. We must get another set from the Mainland of higher magnification oculars - but that can wait. Now we shall really be sure our drawings of magnifications will be correct for the Flora. Enclosed are the receipted bills.

We had a nice visit from Dr. Yale Dawson, the algologist. He made use of our little 2-room cottage near the University until his military plane was ready to fly him to Palmyra Island. He seemed to like it for the few days lay-over. He borrowed a car I believe from the University for the time, and so was quite independent.

Aloha,

*W. H. Hillebrand*



THE NEW YORK BOTANICAL GARDEN  
BRONX PARK  
NEW YORK 58, N.Y.

PRESIDENT  
CHARLES B. HARDING  
TREASURER  
BERKELEY GAYNOR

VICE-PRESIDENT  
FREDERICK S. MOSELEY, JR.  
DIRECTOR  
WILLIAM C. STEERE

October 29, 1958

Dr. Otto Degener  
68617 Crozier Drive  
Waialua, Oahu  
Hawaii

Dear Dr. Degener:

Thank you very much for your letter of October 14th. We are sorry that you have had a bout with the flu and trust that you have now recovered.

I have talked with Dr. Rogerson about getting a set of Cantol Atoll algae, and he tells me that in the absence of a curator of algae and with thousands of vials already in stock which desperately need attention, he feels it would be unwise of us to acquire further material, since we suppose that Dr. Yale Dawson will be working up the material for publication.

You may know that Dave Keck has moved to Washington for a year to take over A. C. Smith's position as Program Director for Systematic Biology at the National Science Foundation whereas Smith has gone to the United States National Museum as Director. We will miss Dave, of course, but still it will be grand experience for him and of permanent value to the Botanical Garden.

I should explain to you that we receive 15% overhead on your grant, since this is the normal overhead paid to any institution which handles the financial arrangements of the grant. It has been figured out by many institutions that the actual cost of administering a grant of this kind runs between 25% and 50% and so our charge is by no means exorbitant. If you have any questions concerning this matter I shall be glad to discuss them with you.

Sincerely yours,



William C. Steere  
Director

wcs/gd

Waialua, Oahu, Oahu.  
Nov. 1, 1958.

Dear Dr. Steere,

I received your letter of October 29 stating that the institutional overhead would be 15%. Dr. Keck April 11 wrote us that the charge would be 10%, and thus the application reached NSF. As Mr. Montagne can verify, our book-keeping was of the simplest and briefest type during the past three years. We shall try to keep it so in the future.

The day before you mailed your letter, I wrote Mr. Montagne asking whether the \$6,200 allocated by NSF November 1 should not be invested in U.S. Treasury Bills paying interest of 3.25%, the sum being credited to our project. I imagine his answer is in the mails. That would salvage a useful sum, not exceeding \$200 per year.

It is nice that Dr. Keck will be in Washington for a year in charge of NSF programs. Such liaison between New York and Washington will be of considerable value.

I hope you and Mrs. Steere will have the opportunity to visit the Hawaiian Islands so we can show you living botanical treasures, and what we are accomplishing here.

Sincerely,

BERNICE P. BISHOP MUSEUM  
HONOLULU

---

The Museum has received from

Dr. and Mrs. Otto Degener

the gift of

24 sheets of plants from the Ryukyu Is.

Accession Number 5350

The Trustees gratefully acknowledge this contribution to the  
collections.

*E. H. Bryan Jr.*  
Curator of Collections.

November 14, 19<sup>58</sup>

SMITHSONIAN INSTITUTION  
UNITED STATES NATIONAL MUSEUM  
WASHINGTON 25, D. C.

December 9, 1958

Dr. Otto Degener  
68617 Crozier Drive  
Waialua, Oahu  
Territory of Hawaii

Dear Otto,

As you may have heard, a small committee from the National Science Foundation has been asked to visit the Bishop Museum in order to make a site visit in connection with a facilities proposal. I am delighted to have the chance to accompany this committee. We are scheduled to visit the Museum on January 5 and 6, but I am planning to beat the gun and to come to Honolulu on January 2. I have no plans for the weekend and I wonder whether I could invite myself to stay with you. Actually, I should very much enjoy a couple of days on the beach with nothing to do.\*

My schedule calls for arrival on Friday, January 2, at 4:50 p.m. by Pan American Flight Number 7. Other members of the committee will probably arrive on January 4, and we shall begin staying in a hotel that night. We plan to go back to San Francisco on the 7th.

If it is not convenient for you to put me up Friday and Saturday nights, please do not hesitate to tell me. I am sure that Dr. Spehr would make other arrangements for me in that case. I am looking forward with pleasure to seeing you again and to meeting Isa.

With best regards.

Cordially yours,

AL

A. C. Smith  
Director  
Museum of Natural History

\* Apparently some of us are supposed to spend Sunday (1/4) at the Univ. Marine Station with Hiatt.



THE NEW YORK BOTANICAL GARDEN  
BRONX PARK  
NEW YORK 58, N.Y.

PRESIDENT  
CHARLES S. HARDING  
TREASURER  
BERKELEY GAYNOR

VICE-PRESIDENT  
FREDERICK S. MOSELEY, JR.  
DIRECTOR  
WILLIAM C. STEERE

December 10th, 1958

Mr. Otto Degener  
Waialua  
Oahu, T. H.

Dear Otto:

I must apologize for this tardy response to your letters of October 28th and November 1st. I thank you, also, for the receipted bills enclosed therewith.

As regards the temporary investment of funds on hand from the National Science Foundation, we purchased some time ago \$5,000 in Treasury Certificates of Indebtedness drawing interest at  $2\frac{1}{2}\%$  and payable February 15th. This is an unusual arrangement, but I hope there is no objection to it, although I know that other governmental agencies require the return to the government of any income generated from a grant. I see nothing in the rules of the National Science Foundation to prevent this investment, however.

You did not tell us what your plans are for the expenditure of this money nor when you will be needing it. Could you outline your program and time-table for the expenditure of this grant; in other words submit a budget?

With best wishes for a Merry Christmas and a Happy New Year,  
I am

Sincerely yours,

*H. de la Montagne*  
Henry de la Montagne  
Secretary

HM/dl

Waialua, Oahu, Hawaii.  
Dec. 14, 1958.

Dear Mr. Montagne:

We have your letter before us, and wish to thank you for your expert economy move in investing the \$5,000 in U.S. Treasury Certificates.

Reviewing past prices, I find a sheet with an illustrated description costs about \$50 to print; and one with only text, about \$30. Our ideal aim for this second NSF grant of three years' duration, we believe, should be a finished Book 6 of close to 500 pages, in detail:

150 sheets with illustrated descriptions @ \$50 - - -	\$7,500
100 sheets with text only @ \$30 - - - - -	3,000
3,000 book covers and assemblage into books @ \$1.4	5,000

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\$ 15,500

This ideal of printing a book of 500 pages leaves us a pittance for everything else: field work, artist, car, "porter" & red purse. That is why we originally asked for almost double the sum. But do not worry. We can manage by lowering our aim to a book of slimmer thickness even though, as in the past, we shall use as much of our own cash as we can manage to scrape together. We realize that NSF is furnishing us a grant-in-aid to work on the Hawaiian flora and not necessarily offering to pay 100% of the expense.

You wish a time-table of expenditures. We have enough ms., now at Paradise printers for a bill of \$1,000, not to mention additional expenses such as car license for 1959, repair (receipted bill enclosed), retreading 3 tires, and a few drawings and postage. I believe you should send us \$1,200 now by ordinary surface mail, leaving the remaining \$5,000 in Certificates. Then Feb. 15, we should be able to use \$2,000 for more printing and field work on Kauai.

A friend (with considerable sugar stock) is presently touring Switzerland but will be back on Kauai in February. We hope to botanize on her return as she has many local connections that we of course lack. Her cooperation means access to private lands, loan of a horse, and help in general by residents. It all means savings in cash. She gets fun out of it too, and being listed in print as co-discoverer of novelties. She is a middle-aged "widow-woman."

It does not matter if the \$1,200 for which I am now asking does not quite suffice to clear our bills. We have been such good and faithful customers of the printer that I can always make an immediate part-payment, or cleaning up the balance within the next couple of months. Thus the Treasury Certificates are always safe for their various life-times of three months.

I am not sick, but evidently at 60 years of age I am not as robust as I used to be years ago. Last July Isa and I botanized on Molokai, the cheapest island to reach from Oahu. We hired no assistant because of the expense. So I carried a pail with hatchet, vials & bags for lichens, fungi & blue-greens in one hand and a press for ferns & flowering plants in the other. Isa carried lunch and camera. Back home, I could hardly turn about in bed because of an intense backache. I thought it caused by the

flu, but when it (really DDT poisoning) ended and my back still ached, I finally went to a Honolulu physician. Three Xrays show I did not slip a vertebral disk out of place, but squashed one in the small of my back by carrying too heavy loads. I am to stop that foolishness from now on. It is rather flattering that my heart is strong enough to handle such loads even if my back is not. I still have daily pain but it is bearable.

There are some fascinating areas on various islands that are out of reach ordinarily. A week ago I wrote one of my former students, now a physician on Kauai, if a helicopter is for hire there. Now you know with what ideas we are again flirting. This pipe dream has been in my system ever since 6 years ago. It evaporated for a time when a Kauai flier returned my \$100 with the statement he thought his machine could not rise to the proper elevation (about 4,000 ft.) I required. THIS LAST IS STRICTLY CONFIDENTIAL. In desperation I may some day ask Dr. Steere to use pentagonal D.C., influence to get the Army to land me on inaccessible mountain tops.

Greeting of the Season,

Aloha,