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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.

*originally
submitted
minus map*

NATIONAL SCIENCE FOUNDATION
BIOLOGICAL AND MEDICAL SCIENCES DIVISION

Research Proposal

T.H.Goodspeed

January, 1957

T. H. Goodspeed Professor of Botany and Director, Botanical Garden,
University of California, Berkeley (Emeritus, July 1,
1954; recalled to full time service to June 30, 1957)

Date of birth: May 17, 1887

Education: Brown Univ., AB 1909; Univ. California, PhD 1912

Honorary Degrees: ScD Brown Univ. 1940; Doctor Univ. La Plata 1939

Fellowships: Amer. Scan Foundation, Scandinavia, 1922-23;
Guggenheim Foundation, Europe, 1930-31, South America, 1935

Foreign travel: Europe, 6 visits, 4 for advanced training and research;
South America, Director of 5 Univ. Calif. Botanical Garden
Expeditions, 1935-53

Decorations: Com. Orden al Merito, Chile, 1952; Medallist, Paris, 1955

Major research programs and accomplishments:

- I. The Genus *Nicotiana* -- species origins and evolution, taxonomy (1912-56)
Accumulation of a living collection of all but 4 of the 60 species and many varieties and mapping of their distribution was the primary objective of my South American botanical expeditions (cf. above). This unique collection of the species of a characteristic genus of flowering plants permitted exhaustive investigations (a) of their comparative morphology, (b) of the number, morphology and meiotic behavior of their chromosomes and (c) of their cytogenetic relationships. The information accumulated on these fundamental indications of species origins and evolution, plus evidence on geographic distribution, was presented in a monograph (cf. next page, Publications, 1954) in which the origin, evolution and current relationships of all 60 species was charted.
- II. The character and distribution of elements of the vegetation of temperate South America

I have had a total of over 4 years contact with the floras of the Andes and adjacent areas and their distribution, particularly in Peru, Chile and Argentina but also in Colombia, Bolivia and Uruguay (cf. attached map). Over 60,000 herbarium specimens (some 13,000 numbers) were collected in the regions traversed by myself and assistants, primarily in botanically obscure areas. Many little known or previously unknown taxa and much new distribution evidence was obtained. From this combined evidence accumulated over the past 20 years certain postulates, based upon the geologic history of the Andes, concerning fundamental phytogeographical problems in temperate South America have been derived. A number of areas botanically little known have been shown by preliminary study to be critical for evaluation of these postulates. The accumulation of much additional evidence via further field work in these key areas and correlated studies in South American herbaria is essential (cf. attached project).

PUBLICATIONS

- I. (The genus *Nicotiana* -- species origins and evolution, taxonomy, 1912-1956)
76 articles dealing with the genus *Nicotiana*, primarily its cytogenetics, and a monograph "The Genus *Nicotiana* - Origins, Relationships and Evolution of its Species in the Light of their Distribution, Morphology and Cytogenetics." 536 pages. Waltham, Mass., 1954
- II. (The character and distribution of elements of the vegetation of temperate South America.)
Three new species of *Nicotiana* from Peru. Univ. Calif. Publ. Bot. 18 (6): 137-152, 1938
Amaryllidaceae from the University of California Botanical Expeditions to the Andes. *Herbertia*, 17-30, 1940
The South American genetic groups of the genus *Nicotiana* and their distribution. Proc. VIII Amer. Sci. Cong. Washington, D.C., 231-238, 1942
A fourth new species of *Nicotiana* from Peru. Univ. Calif. Publ. Bot. 18 (8): 195-204, 1941
Geographic distribution of the Chilean members of the genus *Nicotiana*. "Revista Universitaria" (Univ. Catolica de Chile) 26 (2):115-130, 1941
El tabaco y otras especies del genero *Nicotiana*. Univ. de Buenos Aires, Facultad de Agronomia y Veterinaria, Bol. 22, 1942 (21 pages)
Vegetation and plant resources of Chile. (in "Plants and Plant Science in Latin America") Waltham, Mass. 1945, pp. 145-149
"Genera et Species Plantarum Argentinarum." Science 100 (2603):445, Nov. 1944
Nicotiana arentsii -- a new, naturally occurring amphidiploid species. Proc. Calif. Acad. Sci. 25:291-305, 1944
A fifth new species from Peru. Rev. Univ. Guzco, #87:65-70, 1945
Los Parques Nacionales y la Conservacion de La Naturaleza. Revista de America, Sept. 1946
The University of California Botanical Garden Expeditions to the Andes (1935-1952) With Observations on the Phytogeography of Peru. --- with H. E. Stork. Univ. Calif. Publ. Bot. 28:79-112, 1955
The following by Paul C. Hutchison, Sr. Botanist, Univ. Calif. Botanical Garden, Berkeley (member of the 5th Expedition):
Studies of South American Cactaceae 1. The identity and status of *Rhipsalis monacantha* Grisebach. Cact. & Succ. Jour. Amer. 24 (6):176-179, 1952
Studies of South American Cactaceae 2. *Echinocactus humilis* Philippi, a Chilean endemic with primarily juvenile stems. Cact. & Succ. Jour. Amer. 25 (2):34-37, 1953
Studies of South American Cactaceae 3. Variation in *Copiapoa cinerea* (Philippi) Brit. & Rose. Cact. & Succ. Jour. Amer. 25 (3):63-72, 1953
Studies of South American Cactaceae 4. *Lobivia westii*, a new species from Dept. Apurimac, Peru. Cact. & Succ. Jour. Amer. 26 (6):81-83, 1954
Studies of South American Cactaceae 5. *Neoporteria taltalensis*, a new species from Prov. Antofagasta, Chile. Cact. & Succ. Jour. Amer. 27 (6), 1955
Icones Plantarum Succulentarum 5. *Gymnocalycium westii* P.C.Hutchison. Cact. & Succ. Jour. Amer. 29 (1) in press

The following specific research projects are derived from long contact with the floras of temperate South America, their character and distribution (cf. p. 1). The particular areas involved in each case appear to be critical, in terms of geologic history, for evaluation of postulates concerning trans- and inter-Andean plant distribution and the origin and evolution of the vegetation they now exhibit.

I. Factors influencing trans- and inter-Andean plant distribution

Peru

- (1) In 1942-43 some collections were made of the largely unknown vegetation on the altiplano of northwestern Dept. Puno from the Cordillera de Carabaya eastward toward the Rio Inambari. The evidence obtained points to relationships between species of that Peruvian altiplano and those of the better known altiplano of adjacent Bolivia. When more fully documented it will constitute critical evidence in support of the postulated role of high plateaus established prior to recent vertical uplift as ancient pathways of trans-Andean plant dispersal. To obtain such documentation intensive collecting will be carried on in Dept. Puno.
- (2) Preliminary examination of the vegetation of the vast canyon of the Rio Marañon in Dept. Cajamarca some 200 miles below its source shows remarkably sharp zonation of its elements under the influence of altitude and exposure. This evidence will be verified and greatly extended by collections and vegetation mapping along the Marañon, beginning at its source in Dept. Huanuco, to produce a hitherto undocumented picture of the relation of environmental factors to the character and distribution of inter-Andean floras.

Chile

The botanically little known vegetation in the area of juncture of Chile, Peru, Bolivia and Argentina in Prov. Tarapacá appears to provide specific evidence concerning limitation on plant distribution imposed by the establishment of the present day Andean crest. Verification of this postulate requires determination of the composition of the vegetation of the area and of the role of passes (particularly between Chile and Argentina) as recent avenues of trans-Andean plant migration.

II. The antarctic element in the vegetation of South Central Chile

Post glacial relics of the current vegetation of South Central Chile, a temperate rain forest, are known to occur in arid North Central Chile. These relics, existing today in a semi-desert, form "islands" containing depauperate equivalents of South Chilean species and point to relatively recent alterations in climatic conditions in Chile. That, correspondingly, "islands" of subantarctic species, characteristic today of Chilean Patagonia, occur in the temperate rain forest of South Central Chile has been suspected. Preliminary evidence indicates that the unique flora of the isolated Cordillera Pelada on the southern extremity of western Prov. Valdivia (41° S) is such a subantarctic relic. To establish this fact and the influence of subantarctic elements on the composition of the surrounding rain forest intensive collecting and vegetation mapping is projected.

ESTIMATED BUDGET ----- *revised in original submitted* \$20,355

SOUTH AMERICA -- September 1, 1957 to March 31, 1958

Salaries

T. H. Goodspeed, Director of project, botanist and collector; pension \$496 mo.; project salary, \$200 mo. -----	1,400
W.J.Eyerdam (Seattle, Wash.), botanist and collector; full time, 7 months; on leave without pay; project salary, \$300 mo. -----	2,100
A second North American botanist and collector; full time, 7 months; on leave without pay; project salary, \$300 mo., -----	2,100
total salaries -----	5,600

Maintenance (board and lodging)

W.J.Eyerdam (botanist and collector) 210 days @ \$5 -----	1,050
A second North American botanist and collector, 210 days @ \$5 -----	1,050
total maintenance ---	2,100

Transportation

San Francisco to Chile and return W.J.Eyerdam and a second North American botanist and collector ---- \$850 each -----	1,700
In South America railway, truck hire, pack trains -----	2,000
total transportation -----	3,700

Expendable plant collecting equipment ----- 300

TOTAL IN SOUTH AMERICA --- 11,700

UNIVERSITY OF CALIFORNIA, BERKELEY -- April 1, 1958 to June 30, 1959

Salaries

T.H.Goodspeed, Director of project, botanist; pension \$496 mo.; project salary (half time), \$100 mo. -----	1,500
Technical assistance in handling the collections made in South America Herbarium specimens -- recording, labeling, classifying, naming and distributing --	4,000
Living material -- propagation and study of -----	500
TOTAL IN BERKELEY -----	6,000

UNIVERSITY OVERHEAD (15%) ----- 2,655

TOTAL BUDGET ----- 20,355

OTHER SOURCES OF SUPPORT FOR PROJECT

John Simon Guggenheim Memorial Foundation Fellowship grant to T.H.Goodspeed (Project Director) -----	\$3,000
To provide transportation to South America and return, maintenance in South America, technical assistance in South America	

*As revised
as required
retained*

WORK SHEET
TO ACCOMPANY APPLICATION FOR EXTRA-MURAL FUNDS
BUDGET

Faculty Salaries
Non-Faculty Salaries and General Assistance	<u>\$10,900</u>
Amount of Salaries and General Assistance subject to State Employees Retirement Contributions:	
Number of Employees in SERS category:	
State Employees Retirement Contributions
Provision for Workmen's Compensation
Supplies	<u>300</u>
Equipment (Itemize equipment having value of \$100.00 or more)
Travel (to, from, and in South America)	<u>3,700</u>
Other items (maintenance in South America, 7 months, 3 persons)	<u>2,800</u>
University Overhead (<u>15</u> %)	<u>2,655</u>
TOTAL FOR PROJECT	<u>\$20,355</u>

WORK SHEET
TO ACCOMPANY APPLICATION FOR EXTRA-MURAL FUNDS
BUDGET

Faculty Salaries (Emeritus Professor)	22,900
Non-Faculty Salaries and General Assistance	8,700
Amount of Salaries and General Assistance subject to State Employees Retirement Contributions: _____	
Number of Employees in SERS category: _____	
State Employees Retirement Contributions	_____
Provision for Workmen's Compensation	_____
Supplies	300
Equipment (Itemize equipment having value of \$100.00 or more)	_____
Travel (to, from and in South America)	3,700
Other items (maintenance in South America, 7 months, 2 persons)	2,100
University Overhead (15 %)	2,655
TOTAL FOR PROJECT	20,355

ESTIMATED BUDGET -----

save - notation ok
\$20,355

SOUTH AMERICA -- September 1, 1957 to March 31, 1958

Magnifying
Mrs. LuceSalaries

376/mo
- 20% increase
= 451
455
376/mo
- 20% increase
= 451
455
2nd step!

W.J. Eyerdam (Seattle, Wash.), botanist and collector, full time, 7 months; on leave without pay; project salary, \$300 mo. ----- 2,100 3206

A second North American botanist and collector; full time, 7 months; on leave without pay; project salary, \$300 mo. ----- 2,100 3206

One South American assistant collector; full time, 7 months; on leave without pay; project salary \$100 mo. ----- 700 1788

total salaries ----- 4,900 7,700

Maintenance (board and lodging)

W.J. Eyerdam (botanist and collector) ----- 1,050 1106

A second North American botanist and collector ----- 1,050 1106

One South American assistant collector ----- 700 588

total maintenance ----- 2,800

Transportation

San Francisco to Chile and return

W.J. Eyerdam and a second North American botanist and collector --- \$850 each ----- 1,700

In South America

railway, truck hire, pack trains ----- 2,000

total transportation ----- 3,700

Expeddable collecting equipment -----

300

TOTAL IN SOUTH AMERICA *----- 11,700

UNIVERSITY OF CALIFORNIA, BERKELEY -- April 1, 1958 to June 30, 1959

Salaries

10 mo
Consultant in botany (only note you will be approved bill)

Harvey E. Stork (Emeritus Professor of Botany, Carleton College) half time; project salary -- \$250 mo (10 mo) 2,500 2,650

Technical assistance in handling the collections made in South America

Herbarium specimens -- recording, labeling, classifying, naming and distributing ----- 3,250 2850

Living material -- propagation and study of -- 500 500

TOTAL IN BERKELEY ----- 6,000

UNIVERSITY OVERHEAD (15%) -----

2,655

TOTAL BUDGET ----- 20,355

OTHER SOURCES OF SUPPORT FOR PROJECT

John Simon Guggenheim Memorial Foundation Fellowship grant to T.H. Goodspeed (Project Director) ----- \$3,000

To provide transportation to South America and return, maintenance in South America, technical assistance in South America

NATIONAL SCIENCE FOUNDATION
BIOLOGICAL AND MEDICAL SCIENCES DIVISION

Request for grant-in-aid

By University of California, Berkeley

Title of proposed research: Evaluation and clarification
of phytogeographic problems
in temperate South America

Desired starting date: September 1, 1957

Period of support requested: September 1, 1957 to June 30,
1959.

Project Director: T. H. Goodspeed

T. H. Goodspeed Professor of Botany and Director, Botanical Garden, University of California, Berkeley (Emeritus, July 1, 1954; recalled to full time service to June 30, 1957)

Date of birth: May 17, 1887

Education: Brown Univ., A.B. 1909; Univ. California, Ph.D. 1912

Honorary degrees: Sc.D., Brown Univ. 1940; Doctor, Univ. La Plata 1939

Fellowships: Amer. Scan. Foundation, Scandinavia, 1922-23; Guggenheim Foundation, Europe, 1930-31, South America, 1935

Foreign travel: Europe, 6 visits, 4 for advanced training and research; South America, Director of 5 Univ. Calif. Botanical Garden Expeditions, 1935-53

Decorations: Com. Orden al Merito, Chile, 1952; Medallist, Paris, 1955

Major research programs and accomplishments:

I. The Genus *Nicotiana* -- species origins and evolution, taxonomy (1912-56)

Accumulation of a living collection of all but 4 of the 60 species and many varieties and mapping of their distribution was the primary objective of my South American botanical expeditions (cf. above). This unique collection of the species of a characteristic genus of flowering plants permitted exhaustive investigations (a) of their comparative morphology, (b) of the number, morphology and meiotic behavior of their chromosomes and (c) of their cytogenetic relationships. The information accumulated on these fundamental indications of species origins and evolution, plus evidence on geographic distribution, was presented in a monograph (cf. next page, Publications, 1954) in which the origin, evolution and current relationships of all 60 species was charted.

II. The character and distribution of elements of the vegetation of temperate South America

I have had a total of over 4 years contact with the floras of the Andes and adjacent areas and their distribution, particularly in Peru, Chile and Argentina but also in Colombia, Bolivia and Uruguay (cf. attached map). Over 60,000 herbarium specimens (some 13,000 numbers) were collected in the regions traversed by myself and assistants, primarily in botanically obscure areas. Many little known or previously unknown taxa and much new distribution evidence was obtained. From this combined evidence accumulated over the past 20 years certain postulates, based upon the geologic history of the Andes, concerning

fundamental phytogeographical problems in temperate South America have been derived. A number of areas botanically little known have been shown by preliminary study to be critical for evolution of these postulates. The accumulation of much additional evidence via further field work in these key areas and correlated studies in South American herbaria is essential (cf. attached project).

PUBLICATIONS

- I. (The genus *Nicotiana* -- species origins and evolution, taxonomy, 1912-1956)

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Nicotiana arentsii -- a new, naturally occurring amphidiploid species. Proc. Calif. Acad. Sci. 25: 291-305, 1944

A fifth new species from Peru. Rev. Univ. Cuzco, #87: 65-70, 1945

Los Parques Nacionales y la Conservacion de La Naturaleza. Revista de America, Sept., 1946

The University of California Botanical Garden Expeditions to the Andes (1935-1952) With Observations on the Phytogeography of Peru. --with H. E. Stork. Univ. Calif. Publ. Bot. 28: 72-142, 1955

The following by Paul C. Hutchison, Sr. Botanist, Univ. Calif. Botanical Garden, Berkeley (member of the 5th Expedition):

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Studies of South American Cactaceae 2. *Echinocactus humilis* Philippi, a Chilean endemic with primarily juvenile stems. Cact. & Succ. Jour. Amer. 25 (2): 34-37, 1953

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Icones Plantarum Succulentarum 5. *Gymnocalycium westii* P. C. Hutchison. Cact. & Succ. Jour. Amer. 29 (1), in press

Description of Proposed Research (Abstract and Detailed)

Abstract

- I. Factors in trans- and inter-Andean plant distribution (Peru, Bolivia, Chile) -- Documentation of the postulated role of:
 - 1) elevated plateaus established prior to recent Andean uplift as ancient pathways of East-West plant distribution
 - 2) the present Andean crest as a barrier to current trans-Andean plant distribution
 - 3) altitude and temperature in determining inter-Andean plant distribution

- II. Documentation of the influence upon the composition of present day Chilean floras of the presence of post-glacial relics of current sub-antarctic species recently found in South Central Chile

Project -- Evaluation and clarification of phytogeographic problems in temperate South America, 1957-59, T. H. Goodspeed

The following specific research projects are derived from long contact with the floras of temperate South America, their character and distribution (cf. p. 1). The particular areas involved in each case appear to be critical, in terms of geologic history, for evaluation of postulates concerning trans- and inter-Andean plant distribution and the origin and evolution of the vegetation they now exhibit.

I. Factors influencing trans- and inter-Andean plant distribution

Peru

- (1) In 1942-43 some collections were made of the largely unknown vegetation on the altiplano of northwestern Dept. Puno from the Cordillera de Carabaya eastward toward the Rio Inambari. The evidence obtained points to relationships between species of that Peruvian altiplano and those of the better known altiplano of adjacent Bolivia. When more fully documented it will constitute critical evidence in support of the postulated role of high plateaus established prior to recent vertical uplift as ancient pathways of trans-Andean plant dispersal. To obtain such documentation intensive collecting will be carried on in Dept. Puno.
- (2) Preliminary examination of the vegetation of the vast canyon of the Rio Marañon in Dept. Cajamarca some 200 miles below its source shows remarkably sharp zonation of its elements under the influence of altitude and exposure. This evidence will be verified and greatly extended by collections and vegetation mapping along the Marañon, beginning at its source in Dept. Huanuco, to produce a hitherto undocumented picture of the relation of environmental factors to the character and distribution of inter-Andean floras.

Chile

The botanically little known vegetation in the area of juncture of Chile, Peru, Bolivia and Argentina in Prov. Tarapacá appears to provide specific evidence concerning limitation on plant distribution imposed by the establishment of the present day Andean crest. Verification of this postulate requires determination of the composition of the vegetation of the area and of the role of passes (particularly between Chile and Argentina) as recent avenues of trans-Andean plant migration.

II. The antarctic element in the vegetation of South Central Chile

Post-glacial relics of the current vegetation of South Central Chile, a temperate rain forest, are known to occur in arid North Central Chile. These relics, existing today in a semi-desert, form "islands" containing depauperate equivalents of South Chilean species and point to relatively recent alterations in climatic conditions in Chile. That, correspondingly, "islands" of subantarctic species, characteristic today of Chilean Patagonia, occur in the temperate rain forest of South Central Chile has been suspected. Preliminary evidence indicates that the unique flora of the isolated Cordillera Pelada on the southern extremity of western Prov. Valdivia (41° S) is such a sub-antarctic relic. To establish this fact and the influence of sub-antarctic elements on the composition of the surrounding rain forest, intensive collecting and vegetation mapping is projected.

The majority of the designated areas in South America where the proposed research will be carried on are relatively isolated and without facilities. Headquarters in the field will be established at suitable points for preliminary preparation of herbarium specimens. They will be periodically removed to laboratory facilities which will be provided at, for example, the Nacional Museum in Santiago and the La Molina Agricultural Experiment Station in Lima, where they will receive final preparation for shipment to California.

The herbarium specimens and photographs to be obtained will voucher vegetation maps of the designated areas which will be made in the field, the two to be intensively studied at the University of California (Berkeley) following the close of field work in South America.

In certain instances where proper herbarium material cannot be obtained in the field, seeds, bulbs, cuttings or living plants will be sent to Berkeley to be grown in the University of California Botanical Garden.

When possible, duplicate herbarium specimens will be obtained for distribution, upon request, to specialists in particular plant groups.

Pertinent Literature

- Beetle, A. A.
1943. Phytogeography of Patagonia. Bot. Rev. 9 (10)
- Cardenas, M.
1945. Aspecto general de la vegetacion de Bolivia, in Verdoorn "Plants and Plant Science in Latin America." Waltham
- Goodspeed, T. H.
1945. Notes on the vegetation and plant resources of Chile, in Verdoorn "Plants and Plant Science in Latin America." Waltham (Other references, cf. personal bibliography.)

Pertinent Literature (continued)

- Herrera, F. L.
 1935. El mundo vegetal de los antiguos Peruanos (with Yacovleff, E.)
 1937. Rev. Mus. Nac. Lima 4 (1)
 1937. Estudios sobre la flora del Dept. del Cuzco. Rev. Cien, Univ. San Marcos. 38 (420)
 1941. Sinopsis de la flora del Cuzco. Lima
- Looser, G.
 1935. Argumentos botanicos a favor de un cambio de clima en Chile Central en tiempos geologicos recientes. Rev. Univ. 20 (6, 7)
- Macbride, J. F.
 1936. Flora of Peru. Vol. 13. Chicago
- Muñoz, P. C. and Pisano, V. E.
 1947. Estudio de la vegetacion y flora de los parques nacionales de Fray Jorge y Talinay. Agric. Tec. 7 (2)
- Perez-Moreau, R. A. and Sgrosso, P.
 1949. Diferencia que nos sugieren los conceptos de fitoclimas de camefitos articos y antarticos. Rev. Inst. Nac. Cien. Nat. 1 (6)
- Reiche, K.
 1907. Grundzüge der Pflanzenverbreitung in Chile. Leipzig
- Skottsberg, C.
 1910. Have we any evidences of post glacial climatic changes in Patagonia and Tierra del Fuego? Postgl. Klimav. Stockholm
 1916. Die vegetationsverhältnisse langs der cordillera de los Andes S. von 41° S. K. Sv. Vetakad. Handl. 56 (5)
 1924. Zur gefässpflanzenflora westpatagoniens. Kung. Vel. och Vitt.-Sam. Handl. 28 (3). Göteborg
 1931. Zur Pflanzengeographie Patagoniens. Ber. d. Deut. Bot. Ges. 49 (10)
 1954. Antarctic flowering plants. Bot. Tids. 51
- Smith, A. C. and Johnston, I. M.
 1945. A phytogeographical sketch of Latin America. in Verdoorn "Plants and Plant Science in Latin America." Waltham
- Urban, O.
 1934. Plantas endemicas de Chile. Concepcion
- Weberbauer, A.
 1945. El mundo vegetal de los Andes Peruanos. Lima
- Williams, L.
 1945. The phytogeography of Peru. in Verdoorn "Plants and Plant Science in Latin America." Waltham

PersonnelSouth America

T. H. Goodspeed, Project Director -- (cf. page 1)

W. J. Eyerdam -- over 30 years plant collecting experience in Alaska; member Swedish botanical expedition in Kamchatka; botanist and collector South Seas Exploring Expedition (principally in Tahiti); member 2nd University of California Botanical Garden Expedition to the Andes, 1938-39

A second North American botanist and collector will be engaged who will have had a considerable background in plant exploration (a portion at least in Latin America), preferably one who has a particular scientific interest in elements of the floras to be studied

An assistant South American collector who has had botanical training and experience in plant collecting and will assist one or other of the North American botanists and collectors

University of California, Berkeley

Harvey E. Stork, Emeritus Professor of Botany, Carleton College -- specialist in the taxonomy and anatomy of Latin American woody species with emphasis upon those of Costa Rica; director of the Peruvian section of the 2nd University of California Botanical Garden Expedition to the Andes (1938-39) and thus familiar with the character and distribution of the floras of Peru

A number of part-time technical assistants to assist the Project Director and Dr. Stork in the distribution, labeling and identification of the large number of herbarium specimens (and photographs) which it is anticipated will be obtained in South America

ESTIMATED BUDGET----- \$20,355

SOUTH AMERICA -- September 1, 1957 to March 31, 1958

Salaries

W.J. Eyerdam (Seattle, Wash.), botanically
trained and experienced plant collector*;
full time, 7 months; on leave without
pay; salary, \$458/mo. ----- \$3,206

A second North American, botanically
trained and experienced plant collector*;
full time, 7 months; on leave without
pay; salary, \$458/mo. ----- 3,206

One South American assistant collector;
full time, 7 months; on leave without
pay; not to be on University payroll
salary, \$184/mo. ----- 1,288

total salaries ----- \$7,700

Transportation

San Francisco to Chile and return

W.J. Eyerdam and a second North American
Sr. Laboratory Technician --\$850 each-- 1,700

In South America

Railway, truck hire, pack trains ----- 2,000

total transportation 3,700

Expendable collecting equipment ----- 300

TOTAL IN SOUTH AMERICA ----- \$11,700

UNIVERSITY OF CALIFORNIA, BERKELEY -- April 1, 1958 to June 30, 1959

Salaries

Harvey E. Stork (Emeritus Professor of Botany,
Carleton College)

Consultant in Botany; half time, 10
months; salary, \$265/mo. ----- 2,650

Technical assistance in handling the
collections made in South America
Herbarium specimens -- recording,
labeling, classifying, naming and
distribution----- 2,850

Living material -- propagation and
study of ----- 500

TOTAL IN BERKELEY ----- \$6,000

UNIVERSITY OVERHEAD (15%) ----- 2,655

TOTAL BUDGET ----- \$20,355

OTHER SOURCES OF SUPPORT FOR PROJECT

John Simon Guggenheim Memorial Foundation

Fellowship grant to T.H. Goodspeed

(Project Director) ----- 3,000

To provide transportation to South America
and return, maintenance in South America