

Am starting for California today, and should reach La Jolla about Aug 8. It will be good to be there again!

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Yours W. E. Ritter

Science For The Millions

By William E. Ritter, President of Science Service

It is sixty years since since Herbert Spencer's discussion of the question "What Education Is of Most Worth?" set English speaking people to thinking as they had not thought before about the value of science and its claims to a place in popular education.

Today the problem of science in education has passed beyond the stage of debate on the general educational value of this domain of knowledge and deals with such questions as that of finding a place for science in the common school curriculum; of what particular sciences shall be taught according to circumstances; how they shall be taught, and so on.

Perhaps the master problem of all now is, How shall the great rank and file of the population be assured that minimum of natural knowledge without which prosperity and progress and happiness in the modern world are impossible?

An effort to do something toward solving this great problem has culminated in the establishment at Washington of an institution to be called "Science Service," the history of which is sketched here for the first time.

"If we must have democracy we must have a more intelligent demos." These words were spoken just as the Great War was ending in such ruin of monarchic and autocratic government and triumph of sentiment and theory at least, of popular government as had never before been seen. They were spoken by Mr. E. W. Scripps whose whole life has been devoted to building up newspaper organizations, the published matter of which reaches millions, and the labor on which is performed by thousands of the demos. The utterance delivered from such an experience had in it somewhat of misgiving about democracy. For better or for worse, democracy is inevitable. This being so, the part of wisdom is to make sure that it shall be for better and not for worse.

Now toward one conclusion experience of all peoples and all ages points unerringly: Without a highly intelligent demos, a highly good democracy is out of the question. But for this age, and this stage of world progress such a conclusion is too general. The vastness and complexity of conditions under which modern men and nations exist are such as to demand intelligence in many different fields.

The demand is not for theoretic completeness as to what intelligence ought to cover but for active effort in behalf of intelligence concerning those things and forces which are most distinctive of the times—those things which pervade it most; which are most potent in it. And what are those things? No broadly seeing, carefully thinking person who is likewise a participant in the real life of the age, can hesitate over an answer: The things and forces which are the subject matter of physical science are the ones that dominate, and overwhelmingly dominate, our era. That this is the "age of science" is acknowledged by everybody, even by many who deprecate the fact.

So the practical but likewise philosophical man, Mr. Scripps, whose words were quoted above, having reached the conviction thus expressed, hesitated not at all as to the general province in which effort should be made to increase the intelligence of the demos. It should be in science. But it should be science in no paltry sense. It should not be science reduced, as in many minds it is today, to the narrow, unhumane bounds of industrial technology. It should be science more in the traditional sense—in the sense of indisputable objective knowledge of whatever kind or source.

But what agency should be used in this effort? Here is another saying of Mr. Scripps: "Whether for good or for bad; whether we like it or whether we don't, ours is an age in which 'public opinion,' control by which reaches to political government, is made by newspapers—by the daily press—more than by any other influence whatever."

The public school? Undoubtedly a mighty factor for enlightening the masses in science as in all else. But the school touches directly and potently only children and youth. *The great life-continuation school is the Press*; and so rapidly and revolutionary does new knowledge come into the modern world and new forces play upon it, that education of youth in the elements and historic deposits of learning cannot at all answer

the needs of modern peoples. Life-continuation education is vital.

With such convictions; with such a business experience; and with such a structural foundation to build on, what more natural than that a project for *increasing the intelligence of demos in science by means of the journalistic press*, should be conceived?

So much for the germinal idea of Science Service. A little now concerning its coming into existence and its organization.

The very essence of adult human living and of adult intelligence forbid that any major agency for life-continuation education should be philanthropic. Serious adult education must be an essential part of real life. It cannot be a charity. It must be a part of the whole business of life and so must be on a business basis. It must pay its own way. Like any other business it must have some capital and must earn money as well as spend money; indeed, it must, finally, earn at least as much as it spends in order to be a "going concern."

But with such an aim as the contemplated educational enterprise would have, earnings for profit in the business sense would be wholly incompatible. No individual should get money from it on any basis other than that of pay for service rendered. But just as the service rendered by the enterprise to individuals or public should not be as charity, so no regular service of individuals to the enterprise should be as charity.

Self-supported public service should be the business motto of the undertaking.

With such conceptions Mr. Scripps has furnished the new enterprise a substantial initial or working capital.

Another principle laid down by the initiator of the enterprise was that because science was to be its field, professional scientists ought to be chiefly, if not wholly responsible for its creation and operation. Only through the efforts of scientific men themselves, said Mr. Scripps, would there be the least chance of success for such an experiment. Not merely their endorsement of it and sympathy for it, but their willingness to work for it, would be indispensable.

"I can do no more," he said, "than say to the scientists of the country, 'Here is the germ of an experiment in disseminating science among the people, and some money for carrying out the experiment. But the experiment itself if tried at all must necessarily be tried by you.'"

The accident, perhaps, of proximity, brought the idea thus outlined to the attention of the writer in the summer of 1919.

The matter seemed to him to contain such possibilities of good that he volunteered to bring it to the attention of the scientific men of the country as far as this could be done within the bounds of reasonable expenditure of time and effort. With this view he devoted two months during the winter of 1919-1920 to visiting a considerable number of the chief centers of scientific research of the country and holding personal and group interviews on the subject with workers in science. A total of nearly three hundred men were reached, and, to a large extent, their views obtained.

On the basis of this study it seemed justifiable to conclude that full fifty per cent of the scientific men of the United States were unqualifiedly favorable to such an experiment and were willing to help it on in such ways as they could; that some forty-five per cent were hesitant, being impressed with the importance of a wider knowledge of the results and methods of science, but also with the difficulties in the way of success in such an undertaking as that suggested; and that about five per cent were positively hostile to the idea either from conviction that it could not be carried out, or that if it could be its success would be useless if not harmful.

The conclusions thus reached warranted, it was felt, efforts toward putting the idea into execution. The consultations, conferences and correspondence had up to date contributed one particular item of enlightenment for the first positive step. No new general large organization should be made. As far as possible organizations already in existence should be utilized. A widespread feeling was manifest among scientists that organization in science was already overdone. A small

corporate working body representative of existing organizations seemed the desirable thing.

But even a single representative from each scientific society, were all those of the country to be counted in, would make a body too large for the ends to be attained.

The immediate problem was, then, that of deciding what few scientific societies are most broadly inclusive of the scientific interests of the country and likewise best fitted to further the public service aims of the projected enterprise.

To deal with these and other formative stage questions, conferences of scientists and journalists were held during the spring, summer, and fall of 1920, two at Mr. Scripps's home, Miramar, California, and two in Washington, D. C. The outcome of these was the decision that The National Academy of Sciences, The American Association for the Advancement of Science, and The National Research Council were the organizations best fitted to serve as the preorganizational foundation for the new corporation, but that since the enterprise was to be vitally connected with journalism, the journalistic profession ought also to be represented.

Two important decisions as to general policy were reached by these preliminary conferences. One was that the educational work of the projected corporation need not be restricted in means to be used by the press, but might, as conditions should warrant, be extended to any instrumentalities whatever, school and college founding and operating excepted.

This enlargement of possible agencies to be used had particularly in view, though by no means exclusively so, moving pictures, lectures, and conferences.

The other decision as to policy concerned the fields of science to be included in the activities. After ample consideration it was unanimously agreed that at present "only subjects in the natural and physical sciences and their applications" shall be within the scope of the corporation's work. The aim here was to exclude the humanistic sciences which, as now conceived and, to a large extent practiced, are subject to much passionate controversy, largely because dealing with "groups of material to which precise criteria of demonstrable evidence cannot be applied."

But the main outcome of these meetings was a provisional organization consisting of six persons as follows: Dr. George E. Hale, representing The National Academy of Sciences, Dr. D. T. MacDougal, representing The American Association for the Advancement of Science, Dr. R. A. Millikan, representing The National Research Council, and Mr. E. W. Scripps, Mr. R. P. Scripps, and Dr. Wm. E. Ritter, representing E. W. Scripps or his Estate.

This provisional organization invited each of the three foundation scientific organizations to nominate two additional members for the final corporation, thus to make nine scientists in all from these organizations. It also provided that the E. W. Scripps Estate should have three representatives; and, finally, that the journalistic profession should be represented by three members. It being found on inquiry that the field of journalism contains no organizations comparable with the three foundational organizations in science, the provisional organization requested Mr. E. W. Scripps to nominate the three representatives from this field.

Provision was also made by the pre-corporation that as soon as the additional nominations were made, further meetings should be held for the purpose of giving the corporation its completed working form.

These organizational meetings took place in Chicago in December, 1920, and in Washington in March, 1921.

The outcome of these was *Science Service* as it now makes its bow to the public, and declares itself to have one and only one central ambition, namely, that of serving the public in the broad sense of contributing to its welfare, and not in the technical sense of syndicating scientific "stories" for its own profit.

The initial membership of the Service follows:

Representing The National Academy of Sciences:

Dr. A. A. Noyes, Director, Chemical Research, California Institute of Technology, Pasadena, California.

Dr. R. A. Millikan, Professor of Physics, University of Chicago, Chicago, Illinois.

Dr. John C. Merriam, President, Carnegie Institution of Washington, Washington, D. C.

Representing The American Association for the Advancement of Science:

Dr. D. T. MacDougal, Director, Desert Laboratory, Carnegie Institution of Washington, Tucson, Arizona.

Dr. J. McKeen Cattell, Editor *Science* and *The Scientific Monthly*, Garrison-on-Hudson, New York.

Dr. George T. Moore, Director, Missouri Botanical Garden, St. Louis, Missouri.

Representing The National Research Council:

Dr. Vernon Kellogg, Permanent Secretary, National Research Council, Washington, D. C.

Dr. George E. Hale, Director, Mount Wilson Solar Observatory of the Carnegie Institution of Washington, Pasadena, California.

Dr. R. M. Yerkes, Chairman, Research Information Service, National Research Council, Washington, D. C.

Representing the Journalistic Profession:

Mr. Edwin F. Gay, President, *New York Evening Post Company*, New York City.

Mr. Chester H. Rowell, former editor and manager, *The Fresno Republican*, now member California Railroad Commission, Berkeley, California.

Mr. William Allen White, editor and manager *The Emporia Gazette*, Emporia, Kansas.

Representing the E. W. Scripps Estate:

Mr. E. W. Scripps, Miramar, California.

Mr. Robert P. Scripps, Cleveland, Ohio.

Dr. Wm. E. Ritter, Director, Scripps Institution for Biological Research of the University of California, La Jolla, California.

The funds of the corporation are not represented by stock but their legal custodianship is a board of trustees the membership of which is now coincident with the membership of the organization.

The officers of the Service are a president, vice-president, secretary and treasurer, and an Executive Committee of five, one from each foundation body, in the hands of which are placed the detailed affairs of the Service. The vice-president of the corporation is chairman of the Executive Committee.

The first officers are: President, Wm. E. Ritter; Vice-President and Chairman of the Executive Committee, Vernon Kellogg; Secretary, Howard Wheeler; Treasurer, Robert P. Scripps.

The Executive Committee is: Chairman, Vernon Kellogg; members, Messrs. Cattell, Gay, Merriam and Ritter. Science Service has opened offices at 1701 Massachusetts Avenue, Washington, D. C., in the same building as the National Research Council.

The first vital business to be done by the corporation was to select an editor and a manager, the two work officials which, it was provided, should be the initial operative portion of the service.

After much searching and great weighing of needs and abilities, Dr. Edwin E. Slosson was chosen Editor, and Mr. Howard Wheeler, Manager.

Dr. Slosson's quite unique standing in America, as a fully accredited scientist and at the same time as a litterateur of distinction, made the final action in his favor decisive. Mr. Slosson holds a doctor's degree in Chemistry from the University of Chicago, and was twelve years Professor of Chemistry in the University of Wyoming, which position brought him into familiar terms with several other branches of science. Following this he was for seventeen years literary editor of *The Independent*, New York. During this period he devoted much time, with great conviction of the importance of the task, to writing popular science. Some of the main fruits of this period in the form of books were: "Great American Universities"; "Major Prophets of Today"; "Six Major Prophets"; lives of Rumford and Gibbs; "Easy Lessons in Einstein"; and, most notable of all, "Creative Chemistry." Lectures as Associate in the School of Journalism, Columbia University, were also part of his activities in these years.

Manager Wheeler's experience on the managerial side of journalism has been quite as varied as Mr. Slosson's on the editorial side. The editor-and-managership of the *San Francisco Daily News*; managership of the Pacific Coast department of the Newspaper Enterprise Association; managing editorship of *Harper's Weekly*; managing editor and later editor of *Everybody's Magazine*; and war correspondent, constitute the inventory of his journalistic activities. He is also the author of "Are We Ready?" a pre-war book on the preparedness question of the United States.

Proloperal

THE SCRIPPS INSTITUTION FOR BIOLOGICAL RESEARCH
OF THE
UNIVERSITY OF CALIFORNIA

LOCATED AT LA JOLLA
NEAR
SAN DIEGO, CALIFORNIA

LA JOLLA, CALIFORNIA

February 9, 1921.

Miss E. B. Scripps,
La Jolla, California.

My dear Miss Scripps:

The following is a memorandum of the things we were discussing this morning.

Seawall from the present concrete wall in a southerly direction to the property line. Construction suggested is the wooded type similar to the seawall on the north side of the concrete seawall

Cost \$2 500.00

Placing of a high pressure water system on the northern portion of the property so as to give additional water and good fire protection to the upper group of houses 1 200.
Roof on laboratory building 400.
Expert examination of the pier 400.

Cost \$2 000.00

Grading, paving and draining the land from the south property line and lying west of the paved highway to the Director's House.

The grading would require a great deal of dirt hauling and moving in order that terraces might be made that would prevent the washing that now occurs, and put them in condition for planting.

Draining would take the water from the terraces and so remove the cause of the washing.

Paving would be about the laboratory and museum building. No general road work is suggested that might be changed in the future work.

Cost \$20 000.00

Maintenance of new graded work per year.

Cost \$ 2 000.00

Enclosed are statements of the years 1916, 1917, 1918, 1919, 1920 to Jan.1st, 1921.

Enclosed is comparison of State gifts and Scripps gifts.

Very sincerely yours,

W.C. Caudell

Business Manager.

WCC/G

Statement of Scripps Institution

Round Figures

(Haines & Crandall - taken from old budget)

| 1913-1914 | Receipts | 1913-1914 | Expenditures |
|----------------------------|---------------|-------------|---------------|
| State | 7,500 | Salaries | 7,500 |
| Scripps Regular | 10,500 | Maintenance | 12,500 |
| Sundries, rents, &c. | 1,000 | Balance | 14,000 |
| Library | 1,000 | | |
| Gifts & Balances from 1913 | 14,000 | | |
| | <u>34,000</u> | | <u>34,000</u> |

| 1914-1915 | <u>Crandall</u> | 1914-1915 | |
|-------------------------|-----------------|-----------------|---------------|
| Balance | 14,000 | Salaries | 7,500 |
| State | 7,500 | Maint. Sal. | 5,200 |
| Scripps regular | 10,500 | Maint. | 7,500 |
| Sundries, rents, &c. | 2,000 | Library | 4,700 |
| Scripps bldg. & grounds | 700 | Bldg. & grounds | 1,600 |
| | <u>34,700</u> | Balance | 8,200 |
| | | | <u>34,700</u> |

| 1915-1916 | | 1915-1916 | |
|----------------------|---------------|-----------------|---------------|
| Balance | 8,200 | Salaries State | 12,500 |
| State | 12,500 | Maint. Sal. | 1,400 |
| Scripps regular | 10,500 | Maintenance | 10,000 |
| Sundries, rents, &c. | 3,000 | Library | 4,100 |
| Scripps library | 5,200 | Bldg. & grounds | 3,000 |
| Scripps bldg. & gds. | 2,800 | Balance | 11,200 |
| | <u>42,200</u> | | <u>42,200</u> |

| 1916-1917 | | 1916-1917 | |
|----------------------|---------------|----------------|---------------|
| Balance | 11,200 | Salaries State | 12,500 |
| State | 12,500 | Maint. Sal. | 4,200 |
| Scripps regular | 10,500 | Maintenance | 15,000 |
| Sundries, rents, &c. | 5,700 | Library | 2,500 |
| | <u>39,900</u> | Blg. & grounds | 200 |
| | | Balance | 5,500 |
| | | | <u>39,900</u> |

| 1917-1918 | | 1917-1918 | |
|----------------------|---------------|-----------------|---------------|
| Balance | 5,500 | Sal. State | 16,200 |
| State | 12,500 | Maintenance | 19,000 |
| University | 5,000 | Library | 3,000 |
| Scripps regular | 10,500 | Bldg. & grounds | 300 |
| Sundries, rents, &c. | 5,200 | Balance | 2,900 |
| Scripps. Bldg & gds. | 2,700 | | <u>41,400</u> |
| | <u>41,400</u> | | |

| 1918 -1919 | Receipts |
|-------------------|---------------|
| Balance | 2,900 |
| University | 5,000 |
| State | 12,500 |
| Scripps regular | 9,000 |
| Sundries,rent,&c. | 6,000 |
| Kelp State | 3,000 |
| Scripps Special | 1,800 |
| | <u>40,200</u> |

| 1918-1919 | Expenditures |
|-------------|---------------|
| Sal. State | 17,500 |
| Maintenance | 16,000 |
| Library | 1,500 |
| Kelp | 500 |
| Boat | 200 |
| Balance | 4,500 |
| | <u>40,200</u> |

| 1919-1920 | |
|-------------------|---------------|
| Balance | 4,500 |
| State | 17,500 |
| University | 5,000 |
| Sundries,rent,&c. | 5,700 |
| E.W.Scripps | 14,000 |
| E.B.Scripps | 9,000 |
| | <u>55,700</u> |

| 1919-1920 | |
|-----------------|---------------|
| State Sal. | 20,000 |
| Maintenance | 14,000 |
| Library | 2,000 |
| Scripps Library | 2,000 |
| Sal.& Boat | 10,000 |
| Balance | 7,700 |
| | <u>55,700</u> |

| 1920-1921 Jan.1st | |
|--------------------|---------------|
| Balance | 7,700 |
| State | 8,750 |
| University | 2,500 |
| Sundries,rents,&c. | 4,400 |
| E. Scripps | 6,800 |
| E.B.Scripps | 4,500 |
| | <u>34,650</u> |

| 1920-1921 Jan.1st | |
|-------------------|---------------|
| State | 9,000 |
| Maintenance | 8,800 |
| Scripps Lib.etc. | 1,300 |
| Univ.Maint. | 2,900 |
| Library | 650 |
| Scripps sal. | 2,000 |
| | <u>23,750</u> |

Bal. Jan.1st 10,900

State now give s for maintenance
Miss Scripps gives for maintenance

\$22,500 per year
9,000 " "

The present estimated value of the land,buildings and equipment is placed at \$300,000.

Mr.Scripps has given various sums for specific items that are of a temporary nature. These are included in the general statement.

Maintenance composes segregations as follows:

Boat,Laboratory, Sumner Laboratory; Supply; General Maint.:
Professional Work; Laboratory salaries; Scripps Salaries.

SURVEY OF SCRIPPS INSTITUTION FOR
BIOLOGICAL RESEARCH

| A. Scripps Institution | Possibilities or Actualities. |
|----------------------------------|---|
| 1. Biology of the Ocean. | |
| a. Naming forms | Index to ocean pasturage. Quantity, character, effect. |
| b. Abundance of forms | Index possible quantity of fish |
| c. Seasonal migrations | Index to fish migrations and food possibilities. |
| d. Market surveys | Information bureau on future possibilities. |
| e. Kelp | Information for companies. Control of beds. |
| 2. Hydrography of Ocean | |
| Temperatures) | Index to ocean currents |
| Salinities) | Index to animal movements |
| Densities) | |
| 3. Climatology | |
| Daily temperatures | Index minimum temperature following day. |
| Seasonal ocean temps. | Index rainfall following winter. |
| Evaporation rate | Index for water and electric cos. |
| 4. Methodology | |
| Equations) | Indexes used for |
| Formula) | Number animals probable Temperatures, etc. |
| 5. Genetics and Heredity | |
| Hybridization Exps. | Derivation of species—Stock breeding. |
| Epilepsy | Index to similar condition in man. |
| Transplantation forms | Index to hereditary tendencies. |
| Color analysis | New technique for work in heredity |
| Environment | Heredity data |
| Birth records mice | Seasonal sex relations. |
| 6. Teaching | |
| Instruction at the Univ. of Cal. | |
| Post-graduate work in | |
| Genetics and Heredity | |
| Hydrography and Biology | |
| 7. Supply Department | |
| Universities | Putting Pacific Ocean forms |
| High Schools | into the hands of our teachers |
| Supply Houses | and students. |

8. Museum
Collections for special study
Instruction to tourists by competent guide.
Information
Special students
15,000 persons in 1920.
Determining names of forms for students, commercial bodies, etc.
9. Publicity
Publicity Secretary
Newspaper articles
Magazine articles
Bulletins
Sending articles regularly to 10 California papers.
Favor vivisection
Conservation plants and animals and natural beauties of National Parks.
Special problems in biology.
10. Visiting Scientists.
Univ. of California.
Universities generally
U.S. Bureaus
Vacational studies.
Much information for little outlay on problems of interest to our State.
Bureau of Plant Biology
Weather Bureau
Bureau of Soils.
11. Science Lectures.
Seminars
Public Lectures
Discussion practical problems
Presentation practical problems.
12.
B. Exploration of North Pacific.
1. Cooperating with other institutions that are attacking the real problems of
Distribution and control of animals of Pacific
Race problems, Anthropology
Bottom studies, depths
temperatures, etc.
International cooperation
Immigration
Cable lines, fishing areas.
- C. U.S. Bureaus.
U.S. Weather Bureau
U.S. Bureau of Soils
U.S. Bureau of Biology
Information, advice and cooperation
Collaboration.
Laboratory space.
- D. Conservation
California Redwoods
National Parks
Local waters
Newspaper and magazine articles
Cooperate with other local societies
- E. Court Testimony
Shark Food Cases
Federal Grand Jury
Federal Courts.

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LOCATED AT LA JOLLA
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LA JOLLA, CALIFORNIA

May 5, 1921

Dear Miss Scripps:

I am returning, in a separate envelope, the photographs which you were so good as to lend me. They came during my absence on a camping trip, so that I was not able to acknowledge them at once. The pictures give me part of the information that I wanted regarding his eyes, but they do not tell the whole story. Probably there is nothing now that would. The boy looks like a bright little fellow. I wonder what could have led to his dying at such a early age. Sincerely yours,
F. B. Sumner

2/22
J. C. HARPER
CURTIS HILLYER
ATTORNEYS

SIXTH FLOOR, SCRIPPS BUILDING
(MAIL ADDRESS, P. O. BOX 1373)
SAN DIEGO, CAL.

Biological

June 7, 1921.

Prof. William E. Ritter,
LaJolla, California.

My dear Professor:

Miss Ellen B. Scripps has authorized me to state that she will provide \$9000 for your salary and the work of the Scripps Institution for Biological Research for the year beginning July 1st, 1921; the same to be paid in monthly installments and to be conditioned on no debts being incurred and expenses rigidly kept within income.

Sincerely yours,

J.C.HARPER.

Approved:

E. B. Scripps

CC EBS
CFM

Prepared

THE SCRIPPS INSTITUTION FOR BIOLOGICAL RESEARCH
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UNIVERSITY OF CALIFORNIA

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LA JOLLA, CALIFORNIA

June 13, 1921.

Miss Ellen B. Scripps,
La Jolla, California.

My dear Miss Scripps:

As the school year is coming to a close, it seems but right that I should tell you some of the things which have transpired during the past year. I know that because of the continued absence of Dr. Ritter and Mrs. Ritter, that you have not been kept in as close touch with the doings of the Scripps Institution as you usually have been. However, I think that I may truthfully say that our work has progressed at rather a rapid pace and that we may report a very successful and fruitful scientific year. We have had successful work done not only by members of our own staff, but also by several men who are renowned in their own lines of work, who have been here from other institutions, among these I might enumerate the following:

Dr. H. H. Laughlin, Cold Spring Harbor, New York, who was with us for nearly six months; Dr. H. W. Norris, of Grinnell College, Iowa, who has been with us about four months in the fall, and who is now spending about three months with us in completing his work; Dr. S. S. Maxwell, who spent two months with us last summer and is spending three months with us this summer. Dr. Maxwell is from the Department of Physiology, University of California; Miss Myrtle Johnson of the Pasadena City Schools, who has spent the entire year at the Institution; Miss Hyde who was with us for about six months; Mr. E. G. Moberg of the University of California, who has been with us as a fellow for the past year and who will be with us as a fellow the next year. He is of the Chemistry Department of the University of California; Drs. Vail, Reed and Fawcett, of the Citrus Experimental Station of Riverside; Miss Hazel Field of New Orleans, who has been doing some special work; Dr. Walter P. Taylor of the U. S. Biological Survey, who is doing all of his writing and laboratory work at the Station and is only leaving for field trips during the summer; Mr. Girard who is doing some special work of investigations in chemistry; Dr. E. G. Conklin of Columbia University, who was with us for about a month. In addition to this, a considerable number of families have taken residence in our cottages whenever opportunity offered, so that during the past year we have had practically all of the cottages filled nearly all the time, showing that we have increased our growth to fill the buildings that have been given to us. Not only has this been true of the living houses, but it is also true of the laboratory, in fact the laboratory has been occupied not only fully, but in many cases the rooms have been over-crowded in the fact that we have placed two or more scientists in each one of the rooms,

thus I hope meeting your desires that the Institution should become a vital factor in the scientific work of the world.

Our own staff has been very active and I will only note a few of the more important things that have been done. Last summer Dr. McEwen attended the conference in Honolulu of scientific men who are taking up the exploration of the North Pacific. Dr. Ritter later went to Washington, where he has been carrying on the active work of the Science Service at the request of Mr. E. W. Scripps, and as you know, he will be returning some time in August. Dr. Sumner and Mr. Huestis have been continuing the work upon heredity and genetics with the mice, and Mr. Sumner is now ready to place two monographs before the scientific world. Dr. Essenberg and Mr. Allen and Mr. Barnhart have continued work on the plankton forms and their work is now beginning to show very definite results and many things will be written up in a short time. And so I feel that I may truthfully say that we have been working conscientiously and progressively during the past year.

More and more it is being brought to my attention that there are broader fields yet possible for the Scripps Institution, and these fields may be harvested in rather a short time if we are but able to physically equip the Station with sufficient room and facilities. This portion of the work has really been my portion for the last year, and I have been in consultation with President Moore of the University of California, Southern Section, Los Angeles, with Mr. Hardy of the San Diego Teachers' Training College, and have been equipping myself with information gained from the Junior College of San Diego, and in addition I have been interviewing the men from the University of California, and from all of these sources I am sure the following course is a desirable one, namely, that there should be built upon our grounds a laboratory room which might be used for general laboratory courses, and we would give a summer course in marine biology. This summer course should be available to students and teachers of Southern California particularly, and then we may expect to have a source from which we may draw students who will do advanced scientific work as well as a successful group of fellows who might carry on the work that is being developed through our staff. It is very apparent to me that this Institution, as well as all institutions, must look forward to the developing of younger students in order that the work of scientific research may be carried on, and that it will be impossible to expect to have properly fitted and properly educated investigators unless we take our place amongst the schools who prepare the students for the particular line of work in which we are interested. And so it seems to me that it is very desirable that we all be considering this phase of the development of the Scripps Institution. I have assurances from President Moore, from members of the University staff and others that they will gladly assist in developing such work if we are able to be equipped to carry it on.

At the time that such physical equipment were placed on our grounds, I should like to see a more modern aquarium established

as an aquarium is certainly one of the most important public educational factors that we have here at the Institution. Thousands of people come to look at the animals in the aquarium every year, and at the present time I am proud of the exhibits that we have there.

Personally, I think that I might add a word of explanation concerning my own activities during the past year. I have been actively trying to carry on the administrative work of the Institution, and for two months during the summer have been doing boat work, which has given, I think, added interest and life to the working force. I have been connected with the City Board of Education, and believe that because of factors entering into the educational development of new students, that it is well worth while for me to do so, as we are vitally interested in the new high school to be located at La Jolla, have been interested in the transportation of our students from the Institution to San Diego, and are interested in the new development of the Junior High School as it is now being taken from the city system into the Teachers' College, and so I think my activities there have been very important so far as the Scripps Institution is concerned. My activities in the San Diego Natural History Society have been such that because of those activities we now have in the process of being installed, the large collection of shells given us by Dr. Baker and Mr. Kelley, and at the same time I have been endeavoring to carry out the general idea of public education which I have been developing or trying to develop at the Scripps Institution. In addition I have been connected with the La Jolla Chamber of Commerce because as Business Manager of the Scripps Institution many of the problems that face La Jolla face me as Business Manager here, and I have felt that co-operation was a desirable factor. During the year I have felt that more than my share of the work has developed in the Chamber of Commerce, but that is a matter of no great moment and right adjustment may soon be expected.

From the above I may summarize the general work that we have carried on at the Scripps Institution, as follows: The regular scientific work of the staff has been carried on successfully, together with work of many visiting investigators. The public has been educated by means of our museum and aquarium and has shown a great interest in the exhibits we have. We have linked up the possible developments of a very intimate nature with other institutions, and we have done our share in carrying on the public duties in our own locality.

Trusting the above may give you some idea of the last year's work, I am

Very sincerely yours,

W. C. Caudall
Business Manager.

WCC/G

SCRIPPS INSTITUTION OF OCEANOGRAPHY
UNIVERSITY OF CALIFORNIA

Conference on the Physical Oceanography and Marine
Meteorology of the Northeast Pacific, and the
Climate of the Western Part of the United States
November 6 and 7.

On November 6 and 7 there will be held at the Scripps Institution of Oceanography of the University of California, which is situated about two and a half miles north of the town of La Jolla, a conference to discuss the temperatures and densities of the waters of the Northeast Pacific, the meteorological conditions in the same region, and the relation between the conditions in and over the ocean to the climate of the western part of the United States. Two climatic problems will be particularly discussed. One is the interrelation between oceanic conditions and the rainfall over the adjacent continental areas; the other will be the problem of the coastal fogs in California. Officers of the United States Navy, representatives of the United States Weather Bureau, hydro-electric and irrigation engineers, foresters, and agriculturists have already accepted invitations to participate in the conference and it is hoped that several other scientific interests will be represented. All persons who are interested in the discussions are invited to attend. The conference will begin at 10 o'clock, Friday morning, November 6, and close at noon, Saturday, November 7.

The preliminary program for the conference is
as follows:

The oceanographic work of the Scripps Institution with special reference to marine hydrography, T.W. Vaughan, Director of the Scripps Institution.

Ocean temperatures and seasonal rainfall, a review of their relation based upon records of the past nine years, G.F. McEwen, Physical oceanographer of the Scripps Institution.

Application of the Scripps Institution's seasonal forecasts of rainfall from ocean temperatures to forecasting seasonal water power supply for the hydro-electric plants of the Southern California Edison Company, A. Wilstam, of the Southern California Edison Company.

The value of long range rainfall forecasting to irrigation and water supply projects in Southern California from an engineering standpoint, Edgar Alan Rowe, Irrigation Engineer.

Seasonal forecasting and its value to the agriculturist in San Diego County, James G. France, Farm Advisor of San Diego County.

Seasonal forecasting and its bearing on forestry problems, J. E. Elliot, Forest supervisor, Forest Service.

Preliminary report on oceanographic observations furnished by the United States Navy during recent maneuvers in the Pacific, G.F. McEwen.

Aerological work of the Naval Air Station, Lieut. E. H. Wyatt.

Forecasting fog on the California coast, Dean Blake, Weather Bureau.

Two or more other papers are expected.

The conference will be closed with a discussion of plans and means for more comprehensive and extensive investigations of the physical oceanography of the Northeast Pacific and related meteorological problems.

Biological

LaJolla, October 3, 1921.

r.E.W.Scripps,
Cincinnati, Ohio.

My dear Mr. Scripps:

Since you went East, Dr. Ritter has laid before your sister the immediate need of a temporary or permanent additional laboratory building. He also sent for me and stressed the urgency of the matter. He feels that the normal development and even the life of the Scripps' Institution require additional facilities; that the institution has already been cramped for a considerable time.

Since the war, all educational institutions of California have received tremendous accessions of students -- the University of California greater than the others. Among ~~these~~^{to} students are some who want to do special work in the summer, or pursue post graduate work in marine biology. Then too students from the State Normal Schools and High School teachers who are interested in biology want opportunities to pursue their studies during the summer. These students and teachers are the hope of the future. Unless the Scripps' Institution provides facilities to meet these wants, these students, teachers and investigators will be forced to go elsewhere. Dr. Ritter feels that such a policy would result in slow starvation and permanent injury to the Scripps' Institution.

The laboratory building was constructed in 1911. Since then large additions to the housing facilities around the Biological Station have been made, and both Dr. Ritter and Capt. Crandall feel that laboratory facilities ought to be brought up to the urgent needs of the situation.

Your sister instructed me to obtain from Capt. Crandall further information including an estimate of cost. I obtained these, and this morning submitted them to her, and she desired me to forward them to

JCH to EWS

-2-

10/3/21

you, with a request that you express your views concerning the same. Dr. Ritter urges that the matter should be promptly settled so as to have the building ready for next summers work.

A large item of equipment. It seems to me that this would need to be gotten only as required. For instance, over three-fourths of the \$8300. is represented by microscopes.

Yours sincerely,

CC to EBS
WER
WCC

J.C.HARPER.

THE SCRIPPS INSTITUTION FOR BIOLOGICAL RESEARCH
OF THE
UNIVERSITY OF CALIFORNIA

LOCATED AT LA JOLLA
NEAR
SAN DIEGO, CALIFORNIA

LA JOLLA, CALIFORNIA

October 1, 1921.

Mr. J. C. Harper,
La Jolla, California.

My dear Mr. Harper:

In accordance with your request of the other evening, I have been, with the assistance of Dr. Ritter and Mr. Allen, drawing up tentative plans for a temporary ~~and~~^{or} a permanent laboratory building.

The purpose of one of these buildings would be to supply room for students who would be brought here by the University Summer Session for work in marine biology, and also more rooms for the use of visiting scientists, as at the present we are not able to accommodate all such as apply during the summer time. The structure that might be decided upon would be used entirely for the enlargement and development of the regular marine program which has been held in view for many years, and which I feel it is desirable to continue if the Scripps Institution is to remain a vital factor in the work of the University.

Enclosed you will find an estimate of the materials necessary to furnish the building such as is shown by the floor plan. This estimate might be reduced for the temporary building by about one half. The temporary building, which I have outlined, itself would cost about \$10,000. A permanent building would cost about \$22,000. In other words, a temporary, wooden structure with equipment would cost about \$15,000, while a permanent building conforming to the general character of our present permanent buildings, with equipment, would cost about \$30,000. These figures, you will understand, are rough estimates, but I am satisfied that the work can be done within them.

The building as contemplated, either as a permanent or temporary one, would consist of one large general laboratory with storerooms, two smaller laboratories for work in embryology and animal behavior, together with storerooms, and about a dozen small individual work rooms for visiting investigators.

Trusting that this will put in shape figures which will give you the opportunity for proper presentation to Miss Scripps, I am

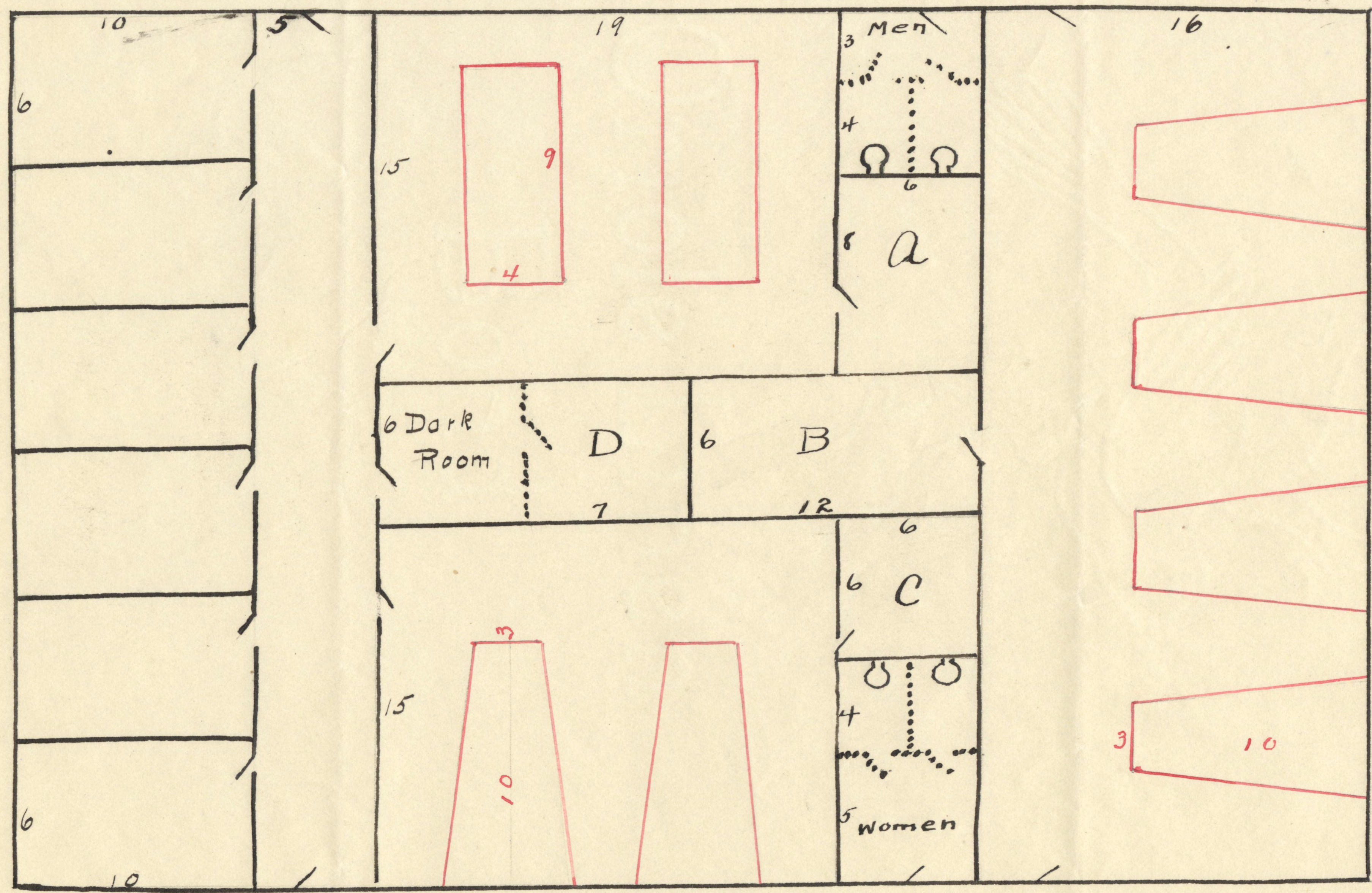
Very sincerely yours,

W. C. Caudill
Business Manager.

wcc/g

56

a } Store rooms
b }
c }
d }



36

Estimates based mainly on Braun Corporation Catalog No.7

| | | | | |
|---|-------|-------------|----------|---------|
| Balance Lab. | #1430 | \$20.00 | 2 | 40.00 |
| " Harvard | 1432 | 12.00 | 2 | 24.00 |
| " Weights | 1612 | 3.60 | 2 | 7.20 |
| " Weights | 1614 | 8.50 | 2 | 17.00 |
| Bath (electric hot air oven) | 1797 | 55.00 | 1 | 55.00 |
| Bath, Paraffine, Woodworth | 1808 | 9.00 | 10 | 90.00 |
| Bath, Paraffine (Electric) ? | | | | |
| Beakers, various sizes Pyrex 2027 | | | estimate | 30.00 |
| Bottles, various | | | estimate | 100.00 |
| Brushes, various | | | estimate | 25.00 |
| Burners, alcohol | 2632 | 4 oz. .45 | 10 | 4.50 |
| Burners, Bunsen | 2694 | 7/16 .50 | 10 | 5.00 |
| Clamps, for tubing | 3122 | 1 in. .45 | 20 | 9.00 |
| Clamps, for tubes &c | 3136 | small .50 | 10 | 5.00 |
| Clamp holders | 3142 | .75 | 10 | 7.50 |
| Cork borers | 3238 | 12pcs. 3.40 | 4 sets | 13.60 |
| Cylinders, graduated | 3414 | various | estimate | 25.00 |
| Dishes, crystallizing | 3464 | various | estimate | 50.00 |
| Dishes, moist chamber | 3471 | 200x70 5.00 | 20 | 100.00 |
| Dishes, staining (get more information) | | | estimate | 100.00 |
| Flasks ? | | | | |
| Funnels | | | estimate | 10.00 |
| Glass cutters ? | | | | |
| Incubator ? | | | | |
| Jar, sample | 4287 | 32 oz | 10 doz. | 70.00 |
| Microscopes, compound (50 double and 4 triple nose piece) about | | | " | 3700.00 |
| Microscopes, dissecting | | | " | 500.00 |
| Microscopes, Binocular similar to B & L KA3 | | | 20 | 2660.00 |
| Microtomes (need more information) | | | estimate | 500.00 |
| Slides | | | estimate | 20.00 |
| Coverglasses | | | estimate | 20.00 |
| Slide boxes | 4339N | per 10 1.75 | 100 | 17.50 |
| Mortars, glass | 4512 | 8 oz 1.00 | 4 | 4.00 |
| Pipettes ? | | | | |
| Supports base 5x8 | 5632 | .70 | 10 | 7.00 |
| Thermometers ? | | | | |
| Tubing, glass | | | estimate | 25.00 |
| Tubing, rubber | | | estimate | 50.00 |
| Watch glasses, Syracuse | 6639 | per 10 .90 | 500 | 45.00 |

Chemicals

Furniture

Fixtures

\$ 8336.30

Waldorf
Astoria
M. Kelly

Waldorf

Waldorf Astoria,
New York, N. Y.,
October 14th, 1921.

Mr. J. C. Harper,
La Jolla, California.

My dear Harper:

Yours of October 3rd at hand.

In a talk I had with Dr. Ritter just before leaving he presented to me the facts about his showing and Grandall's statement.

In a talk I had with Ellen I had stated that beyond making provisions permitting Dr. Ritter's retirement as superannuated and helping Sumner and McEwen to continue their work, I was inclined to withdraw, or remain withdrawn, from the institution's activities until after the University, or rather its Regents, should have formulated a somewhat definite program.

I thought it was possible that I would meet President Barrows sometime during the summer and talk matters over with him.

It has seemed to me from the first that the Scripps Institution for Biological Research has been a sort of troublesome stepchild to the University.

I have told Dr. Ritter that my interest lay in research work rather than what might be called purely educational work.

This plan of holding a summer school at the institution did not arouse any enthusiasm in me.

The idea of the summer school presents itself to me as one of attempting to popularize or advertise an institution that had hitherto failed to gain recognition as being of great value as simply an exclusively scientific laboratory or workshop.

Just as our old Newspaper Enterprise Association was thoroughly corrupted and made of little or no value as a public servant by its attempt to build up a large business, so it seems to me that the Scripps Institution for

Biological Research will be diverted from the aim that I had always had in view for it by any attempt to build it up by means of turning it into a teaching institution.

In my will I have made a sort of conditional provision for the future of the institution. I think there is no doubt but that I would change my will in this respect if the institution would even get fairly started in the way of becoming a department of the University devoted to teaching.

Now you know in one respect Ellen and I have distinctly opposite views.

If Ellen should predecease me and I should be to any considerable extent her heir, I realize I would be bound to continue doing much the same sort of things that she has been doing and will probably continue to do.

I think it is quite possible that her request to you to write me on this subject was really a request for advice from me.

My advice to her, if it is really desired, is that by complying with the wishes of Dr. Ritter in this matter of the summer school her action will be consistent with the general trend of her altruistic efforts.

I might also say that my own actions relative to my handling of anything I may inherit from her will be influenced by what she does or doesn't do in the present case.

Really the Scripps Institution exists by reason of what Ellen has done and therefore I think she has a peculiar right to use influence in molding the future of this institution according to her own views.

I have on a number of occasions had to acknowledge that Ellen is a more successful giver than I have been or can hope to be and that therefore it is more fit that I should be influenced by her opinion than that she should be influenced by mine.

On Dr. Ritter's account I wish that I could give him more enthusiastic support in his present plan than I am doing in this letter.

Yours sincerely,

E. W. Scripps.

P.S. (Extremely confidential)

I am having such an agreeable time now in the east and find that there is so much interesting employment for me here that I may remain several months longer in the east than I was expected to by others when I left the coast.

The secession from the concern of the Western papers has not only shifted the centre of balance of my personal interests but the humiliation and mortification that I have encountered in the West causes me to have a feeling of repugnance to returning, or at least remaining for any length of time, to or near the scene of so much that has been tragic to me.

I doubt if I would ever again cross the Rocky Mountains were it not for my sister's interests and life-long associations.

E.W.S.

cc
WER
TLS
EBS
RFS

W. Ritter - Berkeley

COPY

December 3, 1921.

President David P. Barrows,
University of California,
Berkeley, California.

My dear President Barrows:

This year brings me to the age fixed upon by the Regents of the University, wisely I think, as that at which academic officers of the University shall give way for younger men.

You have assured me that whether I retire now or not shall be optional with myself. This consideration on your part I greatly appreciate since the retirement rule is, as I understand, self-executing, the Regents reserving the right, however, to continue the retiring officer for a period.

The enterprise of which the Scripps Institution is the present expression has had the best part of my life. It is, consequently, impossible that I should put it aside without giving its future usefulness and welfare much earnest thought.

Having done this, and having thought in the same way about obligations and opportunities before me outside of the Institution, I am unable to reach any other conclusion than that the retirement rule should be permitted to take its course.

I therefore request that the necessary steps be taken to place me on the retired list of the University at the end of the present year, June 30, 1922.

Very sincerely yours,

(Signed) Wm. E. Ritter.

WER/G