In February 1905 the Oregon State Academy of Sciences formed in Portland to promote scientific research and diffusion of scientific knowledge in Oregon. The founders also planned to assist in the discovery and development of the state's natural resources. The Academy was the first scientific society in Oregon with professional statewide involvement and leadership. Representatives from all important colleges and universities in the state attempted to create a solid, cooperative scientific institution.

The Academy of Sciences emerged during a period in Portland's history when its cultural demeanor matured and various social institutions were established. The Lewis and Clark Centennial Exposition in 1905 acted as a catalyst for the Academy's founding through the efforts of Edmund P. Sheldon, the fair's Superintendent of Forestry. Sheldon was the prime mover of the Academy and served as its president for the first three years.
During the span of its existence the Academy of Sciences held migratory annual meetings in the Willamette Valley. It also had a temporary, yet significant association with the City Free Museum in Portland between 1905-1909. In 1910 the Academy became legally incorporated, but by 1914 its activity had ceased.

When the Academy organized, it satisfied the institutional needs of a substantial number of recently arrived professional scientists. These professionals, coming from the midwestern and northeastern Unites States primarily, intended to duplicate the scientific societies they were familiar with. The Academy's membership--about 90 active participants--was a mixture of college-based professionals and amateur naturalists, however, and this caused resentment within the society. The conflict between the two factions was partly responsible for its decline.

Because of its short life and position in the sequence of state academies of science, the Oregon State Academy of Sciences is interpreted as a transitional organization, functioning after the amateur-led Oregon Academy of Sciences (1892-1897?) and before the professionally oriented Oregon Academy of Science (1943-present). The Academy's previous obscurity resulted from confusion with these other societies.
Institutionalizing Science in Oregon: 
The Role of the Oregon State Academy of Sciences, 1905-1914

by

Richard Thomas Read

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Date thesis is presented August 12, 1983

Typed by Express Typing Service for Richard Thomas Read
With heartfelt sincerity this thesis is dedicated . . .

to the fond memory of my great-uncle,
    Richard E. Morgan, Jr.,

to the perpetual love of my parents,
    Edward and Cynthia Read,

and to the future dreams of my daughter,
    Lillian Shasta Read.
ACKNOWLEDGEMENTS

Remembering and saluting the numerous individuals who assisted with my efforts is an honored privilege. I will always be grateful to them for helping not only with my thesis but throughout my degree program.

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While researching the Oregon State Academy of Sciences, I gathered information from the archival centers in the Willamette Valley. These persons were especially cooperative and friendly: Dorothy Johansen at the Reed College Archives, Alex Toth at the Pacific University Library and Archives, Vallery Klauss at the Oregon State Archives, Clara Fairfield at the Oregon Museum of Science and Industry, Steven Hallberg at the Oregon Historical Society Library, Terry Lybecker at the Portland Archives and Records Center, and Keith Richard at the University of Oregon Archives. At the Oregon State University Archives, Ann Merydith-Wolf and Laurie Filson tracked down records during several visits. Other unnamed individuals provided assistance and I collectively acknowledge their help also.

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# TABLE OF CONTENTS

I. INTRODUCTION 1

II. CULTURAL DEVELOPMENT AND SCIENTIFIC SOCIETIES IN PORTLAND AT THE END OF THE NINETEENTH CENTURY 12

III. OREGON STATE ACADEMY OF SCIENCES, 1905-1914 37

IV. SIGNIFICANCE OF THE O.S.A.S. 69

BIBLIOGRAPHY 74

APPENDICES

Appendix A: Constitution of the Oregon State Academy of Sciences (1905) 88

Appendix B: Officers of the Oregon State Academy of Sciences 97

Appendix C: Committees of the Oregon State Academy of Sciences 100

Appendix D: Persons Involved with the Oregon State Academy of Sciences 101

Appendix E: Known Meetings of the Oregon State Academy of Sciences 121

Appendix F: Known Papers and Lectures Presented at Meetings 123

Appendix G: Active Participants Affiliated with Educational Institutions 128

Appendix H: Articles of Incorporation of the Oregon Academy of Science (1910) 130

Appendix I: Meeting Programs 138

Appendix J: Examples of Academy Printed Matter 157

Appendix K: Discussion of Three Academies of Science in Oregon 161
<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Overton Price letter</td>
<td>47</td>
</tr>
<tr>
<td>2</td>
<td>Oregon Academy of Science logo</td>
<td>163</td>
</tr>
<tr>
<td>Table</td>
<td>Page</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Occupational breakdown of membership using three participation categories</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>165</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chronology of state academies of science in Oregon</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>166</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Membership comparison between three academies of science in Oregon</td>
<td></td>
</tr>
</tbody>
</table>
Institutionalizing Science in Oregon: The Role of the Oregon State Academy of Sciences, 1905-1914

I. INTRODUCTION

The establishment of cultural institutions occurs when critical social forces interact. Institutions are products of the need for social organization. This condition is apparent for many levels within society and has been described for specific parts of the total cultural framework. This thesis focuses on the institutionalization of science within a limited geopolitical area—the state of Oregon—as exemplified by an historical scientific society. The Oregon State Academy of Sciences (1905-1914) functioned as the first statewide scientific organization that attempted to unite persons, especially professionals, interested in all branches of science.\(^1\) Examination of the changes occurring in Oregon with respect to higher education, social reform, conservation of natural resources, and population growth leads to tentative conclusions about the purpose and nature of the Oregon State Academy of Sciences. The persons affiliated with the Academy reflected its character and an analysis of them is an important aspect of the discussion. The Academy's goals and accomplishments provide a fairly accurate picture for an overall understanding of its effect on the Oregon scientific community.

\(^1\)Earlier organizations such as the Northwestern Ornithological Association (1894), Oregon Academy of Sciences (1892), and the Mazamas (1894) claimed some members from around the state, although they were predominantly Portland city clubs of amateur scientists and collector-naturalists.
The larger social forces of the early twentieth century in Oregon influenced the attitudes and practices of science and indeed created a complicated background for reasonable study. The Progressive Era, covering the approximate period 1890-1917, engulfed the entire life history of the Academy of Sciences and undoubtedly influenced its philosophy and operation. The boosterism surrounding the Lewis and Clark Centennial Exposition in 1905 had some impact on the Academy. And the influx of a new generation of professional scientists caused it to become modeled after other established state academies of science.

For clarification and to set the direction properly for this discussion, definitions will be helpful. One source defines institution as "a significant practice, relationship, or organization in a society or culture." The intent here is to illustrate how the Oregon State Academy of Sciences functioned temporarily as a significant scientific society promoting the interaction of persons involved in various scientific activities. Consequently, the thesis combines collective biography with prosopography.

Institutionalization has been examined in the field of sociology extensively. Historians of science have used the tools of sociology to explain the events taking place within certain groups of

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scientists, be it a national scientific population or savants within a city. Although the specific interpretations have varied, all explanations agree that institutions formed as part of the national trend toward scientific professionalization. The nineteenth century in America witnessed an unprecedented expansion of science and technology. As scientific specialization increased, the growth of better educational facilities created a new and significant worker in society--the professional scientist. Following a natural response to promote communication and peer evaluation, these individuals banded together in general and subject-oriented societies to gain recognition. The advantages of having formal institutional bases of operation were primarily tied to funding programs and political influence.

George H. Daniels divided the process of professionalization into four distinct phases: preemption, institutionalization, legitimation, and professional autonomy. Preemption is taken to mean the specialization of an activity formerly undertaken by the general population, with its esoteric jargon and methodology. The institutionalization phase refers to the "need for regularizing relationships among colleagues and between colleagues and outsiders." The legitimation period covers the time necessary for the justification of scientific activities in the public eye. Finally, the phase relating to professional autonomy is the level at which


5Ibid., p. 156.
the scientific community is sufficiently powerful to exhibit normative force and thereby insure ethical behavior.

The system used by Daniels is very applicable to the analysis of the Oregon State Academy of Sciences, since it relates directly to scientific society development. Daniels was careful to point out that these four phases overlap and constantly interact. In fact, bearing this in mind, the Academy of Sciences can be considered a transitional organization somewhere between the preemption phase and institutionalization phase. "The amateur was in the process of being replaced by the trained specialist--the professional who had a single-minded dedication to the interests of science."6

In addition to the change occurring within the scientific community, the scope of the organization was unique by stressing its statewide perspective rather than a city-based outlook (i.e., Portland). Daniels also made the critical distinction between the diffusion of science through popularization and the advancement of science through research. The debate over the primary purpose of the Academy of Sciences will stem partially from this issue.

Nathan Reingold has written extensively on the professionalization of science and presented an argument in favor of examining the members of scientific societies to determine their relative status in the scientific community.7 Reingold divided the

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6Ibid., p. 151.

community's population into three parts including the researchers, practitioners, and cultivators. The researchers were the emerging status-conscious group of professionally educated scientists. Practitioners had "employment in which they, some way or other, use their scientific training, or at least achieve their positions and salaries by virtue of presumed scientific competence." Reingold used the term cultivators instead of amateurs to better describe persons with interest in popular science as a part of the learned culture. When the Oregon State Academy of Sciences formed in 1905, these definite cultural types were recognizable and only when all three were present did the state academy of science concept really have meaning in Oregon. The researchers were the last to enter the state in numbers, coming to the various state and private colleges and universities at the turn of the century. As one reference noted,

The origin and development of learned societies is closely linked with the emergence of the modern university in American society. Both organizations took root during the last two decades of the nineteenth century and the early years of the twentieth century, reflecting a new academic commitment in the United States to the advancement of knowledge through scholarly research.\(^8\)

The section in chapter III dealing with the Academy membership will expand on this area.

A good comparative guide to scientific societies and their dynamics is found in Walter Hendrickson's study of city-based scientific communities.

\(^8\)Ibid., p. 46.

scientific organizations in the American Middle West. He took the position that a cultural progression occurred as settlements grew westward from the eastern seaboard and that it was predominately an urban phenomenon. "In the cities of this area, as they ceased to be frontier towns and settlements, the culture of the urban centers of the older parts of the United States was reproduced." The Pacific Northwest developed the same cultural institutions during the late nineteenth century, lagging behind the Middle West about thirty years. Like Reingold, Hendrickson stressed the idea that scientific societies began as part of the total culture of a city, citing individuals belonging to other intellectual groups such as library associations, medical societies, art associations, historical societies, and mechanics institutes. As professional scientists increased, their specialized needs demanded more rigorous associations and they avoided the generalized, amateur-oriented societies (e.g., natural history societies) in favor of peer-controlled scientific organizations. The national scientific bodies formed during the late nineteenth century in response to the growing population of trained professionals in various branches of science.

Hendrickson concluded his study with an evaluation of the various organizations based on their publication programs, papers read at meetings, and museums started or supported by the societies.

11Ibid., pp. 326-327.
12Ibid., p. 327.
Although information about the Oregon State Academy of Sciences is sketchy, enough is known about these three areas to provide a similar evaluation. As Hendrickson wrote, "often the success or failure of the academies rested on the way in which they sought to achieve their purposes." Since most academies became involved in these activities, they form a standard for comparison.

The discussion rests on how the Oregon State Academy of Sciences attempted unsuccessfully to transcend the basic level of popular science to serve the newly arrived professional scientists attached to institutions of higher learning. The Portland-based population of general science enthusiasts were too numerous for the professionals to overcome. Conveniently supporting this view is the sequence of state academies of science in Oregon. The first one began in 1892 as the Science Club of Portland and changed its name the same year to the Oregon Academy of Sciences. This Academy operated a short period as a local natural history society with very few professional members. The Oregon State Academy of Sciences, founded in 1905, hoped to encourage research and thereby gained a large number of professional scientists, but the population was still too thin to control a statewide organization, so it faded in 1914. The third Academy, still functioning today, began in 1943 and from its inception has been almost totally supported

13Ibid., p. 334.

14The Oregon State Academy of Sciences has been historically obscure due to confusion with the earlier Oregon Academy of Sciences founded in Portland in 1892. Please see Appendix K.
by professional scientists affiliated with the state's colleges and universities. World War II acted as a catalyst for the founding of the current Oregon Academy of Science, as wartime science was considered valuable.

The advantages and disadvantages of a state academy of science have been debated by authors since the early part of the twentieth century.15 City and national organizations seem to be easier to define and justify than are state and regional societies. David Whitney, writing in 1919, emphasized two benefits of state academies of science: (1) meetings for the opportunity to exchange information between people from different parts of their respective states, and (2) publication of articles which would be too specialized or localized to be accepted by large journals. Again, like Hendrickson, Whitney saw the importance of the publication program and the meetings. Whitney went so far to say that if "the academies have outlived their general usefulness they can still remain very influential in existing solely as publication centers for special articles."16 As the evidence will show, the Oregon State Academy of Sciences' efforts to publish a proceedings or transactions  


were futile. Whitney drew some general conclusions from a survey he conducted of all state academies of science. He noted,

"... Only a small percentage of the scientific people of the country are members of the various state academies. The reason for this lack of interest and activity is explained by one secretary as being due to the fact "that the day has gone by when men interested in widely different special lines of research or activity can profitably meet for the common discussion of their interests."17

Whitney then mentioned how some academies attempted to divide into specialized sections and claimed this approach was only successful in the large academies. Shortly after the Oregon State Academy of Sciences formed, the constitution was amended to allow for sections devoted to specific disciplines.

Paul Boyd, responding to Whitney's statements, presented evidence that a majority of representatives supported state academies of science for a variety of reasons, such as close proximity for meetings; unification of overspecialized scientists in universities, government labs, and industry; presentation of local-interest papers; and research promotion. He also noted that these academies fostered state pride, influenced state decisions regarding scientific issues, and supplied a necessary level of organization not afforded by national societies.

In 1927, Wilhelm Segerblom conducted yet another survey of state academies, asking if their respective goals were to promote scientific research or fellowship among persons having scientific interests. Most responses at that time felt the fellowship aspect

17Ibid., p. 517.
of the academies outweighed the research functions. The overall focus was on popular science rather than technical research.

Events leading to the founding of the Oregon State Academy of Sciences were fairly dramatic. The population influx into the Pacific Northwest during the late nineteenth century had enormous impact on the developing cities. Portland achieved a special status due to the completion of the Northern Pacific Railroad in 1883—the first transcontinental route into the northwest. The city grew rapidly as a commercial center serving the entire Columbia River drainage, and during the 1890's, Portland blossomed culturally with many learned societies and recreational clubs. Following a severe economic slump caused by the Panic of 1893, and the recovery provided by the Alaska Gold Rush, Portland hosted a grand World's Fair in 1905, capping the rapid growth phase with optimism. The Lewis and Clark Centennial Exposition ushered in a new era for Portland and started the modern period for the Pacific Northwest. The Oregon State Academy of Sciences began when Edmund P. Sheldon (1969-1917?), Superintendent of Forestry for the Exposition, arranged a meeting of scientists just four months before the opening of the fair. The Exposition acted as a catalyst for the founding of a statewide scientific society. As one leader of the Academy later stated: "The Oregon [State] Academy of Sciences did not come into existence by chance, nor was it the result of accident, but like all great important institutions was the creature of necessity."18

18"Albany Host to Savants of State," Portland Morning Oregonian, 29 April 1911, p. 7.
The story of the Oregon State Academy of Sciences deals with scientists striving for professional identity in an isolated setting. Coming from educational and cultural centers located in the midwestern and eastern United States, these individuals planned to reproduce an advanced mode of behavior—a scientific institution—in a place not yet ready for such development. Although the Academy failed to become permanent, the circumstances surrounding its inception and activities do illustrate the role of a professional scientific society in the general social context.¹⁹

¹⁹To avoid confusion relating to the name of this organization, I will use the name Oregon State Academy of Sciences throughout the period 1905-1914, being fully aware that the name incorporated in 1910 was officially the Oregon Academy of Science. This will easily separate the three state academies of science.
II. CULTURAL DEVELOPMENT AND SCIENTIFIC SOCIETIES
IN PORTLAND AT THE END OF THE NINETEENTH CENTURY

Knowledge of the commercial and industrial growth of Portland in the late nineteenth century is central to a study of developing cultural institutions in the state. The coming of the Northern Pacific Railroad, the expansion of the forest products industry, and improved agriculture all contributed to increasing the population and standard of living in Portland. The grand finale, in a symbolic sense, came together in the Lewis and Clark Centennial Exposition of 1905. This celebration was nothing less than a promotional extravaganza to spotlight Portland's advantages for permanent settlement. This chapter will present a general picture of the cultural development of Portland, especially relating to learned societies, up to the Exposition.

Railroad connections with the eastern U.S. determined the future health of many cities on the Pacific Coast. In September 1883 Portland became the first city in the Pacific Northwest to link up with a transcontinental line, when the Northern Pacific Railroad was completed. Portland gained an equally important transportation route to San Francisco when the Southern Pacific Railroad finished its line.

that line in 1887.\textsuperscript{21} According to one authority on Pacific Northwest history: "The railroads did not revolutionize the region's economy or change to any remarkable degree its patterns of trade. But completion of the transcontinental arteries did give life to a first-class boom."\textsuperscript{22}

The population of Portland almost tripled during the decade from 1880-1890.\textsuperscript{23} The growth boom hit the farming populations as well due to newly accessible agricultural lands along the Columbia River east of the Cascades. However, urbanization was proportionally a greater movement as Portland swelled with one out of every five newcomers to Oregon.\textsuperscript{24} Multnomah and Marion counties received 41% of the arrivals. Land speculation became a major force in business at this time. During this period Portland experienced a fourfold increase in true values of real and personal property.\textsuperscript{25}

Portland's economy relied heavily on the raw materials of an undeveloped land. Using the natural resources of the area, lumbering

\textsuperscript{21}The Southern Pacific Railroad had to complete its track only as far north as Roseburg, since it purchased the Oregon and California Railroad. The O and C line began in Portland in 1870 but, due to a lack of funds, terminated in Roseburg in 1872.

\textsuperscript{22}Johansen and Gates, Empire of the Columbia, p. 315.


\textsuperscript{24}Johansen and Gates, Empire of the Columbia, p. 328.

\textsuperscript{25}Ibid., p. 316.
and flour milling grew into million-dollar industries, expanding in response to the growing population and export trade demand. Manufacturing and banking emerged as crucial elements in the local commercial-industrial complex. In 1887 the first bridge to span the Willamette River at Portland was completed and in 1889 the first electrified street railways went into service.²⁶

By 1890, citizens in Portland were becoming self-conscious about the city's cultural image. In September of that year the Oregon Alpine Club, a local mountaineering group, submitted a four-page proposal to the Portland Common Council in support of creating a city museum. Although it met rejection, the document's concluding paragraph summed up the general sentiment:

>We are confident that this action would be commended by the citizens and that it would be the beginning of a most laudable and beneficial enterprise, unique in the whole northwest, an object of great interest to residents and strangers, a means of practical education and information in most important matters, and an addition beyond value to the wholesome amusement and recreation which it is regarded as the duty of a city of our present magnitude to offer to its inhabitants and the State of which Portland is the metropolis.²⁷

The 1890's witnessed the beginnings of many civic organizations in Portland. Perhaps the population density or a stratified social


²⁷Oregon Alpine Club Museum Proposal, 8 September 1890, Auditors Office Historical File (2012-30), Portland Archives and Records Center, Portland, Oregon. This proposal is signed by George B. Markle, President, and George H. Himes, Secretary. Himes went on later to found the Oregon Historical Society. He also served as a committee member in the Oregon State Academy of Sciences.
hierarchy played some role in stimulating the explosion of societies and associations centering on artistic, historical, educational, recreational, and scientific pursuits. A few organizations took root in the 1880's, such as the Oregon Alpine Club (1887) and the Oregon State Horticultural Society (1885), but the bulk of these formed in the next decade. These included the Multnomah Amateur Athletic Club (1891), Portland Art Association (1892), Science Club of Portland (1892)—which became the Oregon Academy of Sciences, Mazamas (1894), Northwestern Ornithological Association (1894), Waverly Golf Club (1896), University Club (1897), Oregon Historical Society (1898), and John Burroughs Society (1898). The Library Association of Portland was formally organized in 1864, but in 1893 it moved from the second floor of the Ladd and Tilton Bank to its own building, costing $150,000. Similarly, the Portland Art Association began its museum (actually in the library) in 1895.

Referring to this era, E. Kimbark MacColl noted that the "cultural life of the city was centered around the library association and the art association, both of which relied heavily on the old families for financial support."  

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29 MacColl, Shaping of a City, p. 181.

Other indicators of the dynamic nature of the decade were the large Chamber of Commerce building completed in 1893 and the new City Hall in 1894.31

Four of the above-mentioned organizations offered fellowship in natural history--the Oregon Academy of Sciences, Mazamas, Northwestern Ornithological Association (NOA), and the John Burroughs Society. The Academy of Sciences dealt with general topics, while the Mazamas carried on the mountaineering tradition of the Oregon Alpine Club and the other two were devoted to bird study. In fact, the John Burroughs Society acted as a continuation of the earlier NOA. If the State Horticultural Society is taken into consideration, there were essentially four scientific societies (counting the bird groups as one) in Portland at this time.

Most of the members of these natural history societies were, in Reingold's terminology, cultivators of science. However, there were a few exceptions. Frederick L. Washburn, for example, came to Oregon Agricultural College from Harvard in 1888 to teach zoology and entomology. Leaving OAC in 1895, he taught at the University of Oregon until 1902, when he became State Entomologist in Minnesota.32 Washburn was an active member of the Oregon Academy of Sciences and the Northwestern Ornithological Association.33

31Ibid, pp. 87, 146.
32Ernst Dornfeld, History of the Department of Zoology (Corvallis: Oregon State University, 1966), p. 3.
The Pacific Northwest was incompletely known in terms of its biological communities and geological resources at the end of the nineteenth century, so it is easy to understand the interest in collecting during this period. Most natural history societies desired to establish a museum to house their various collections. Specimens in zoology, botany, geology, and anthropology (i.e., Indian artifacts) comprised the majority of private and institutional collections. At the time the Oregon Alpine Club proposed a museum for Portland, three of its members were exploring the Olympic Mountains in Washington with Lt. Jospeh O'Neil's expedition. B. J. Bretherton, N. E. Linsley, and Louis Henderson (listed as mineralogist, naturalist, and botanist, respectively) accompanied the party as the sole scientific component and supposedly had intentions of making collections for the Oregon Alpine Club museum.

Two years after the Alpine Club attempted to start a city museum, the Oregon Academy of Sciences listed a public museum as one of its objectives. In its all-inclusive publication, the Manual for 1892, the Academy's desire to establish a museum took on a provincial appearance, stressing a regional deprivation resulting from no viable repository for Northwest scientific objects:

> Up to the present its treasures have been exploited by eastern and European scientists. Specimens of the greatest value grace their museums, whilst the knowledge seekers of these parts are without the means of pursuing [sic] their studies.

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35Oregon Alpine Club Museum Proposal, p. 3.
The Oregon Academy of Sciences' museum died along with the organization shortly after its impressive entry into the scene of cultural organizations. However, the museum theme continued to be important throughout the 1890's. In 1895, the Oregon Naturalist carried the following note:

Much has been written recently in our daily papers about the necessity of having a public museum where our Naturalists would be able to collect and preserve the specimens of Natural History of our State. Scarcely a day passes but some tourist or collector from abroad, takes away valuable fossil or other interesting material.

Permit me to suggest a way that this continued forageing [sic] may be stopped. The way would be for our Naturalists and all others interested to organize a society for the purpose of collecting and retaining every thing that has reference to the study of the sciences.37

The author of this suggestion was Anthony W. Miller (1842-1923), an amateur geologist who had recently served as Assistant Superintendent of the Oregon Mineral Exhibit at the World's Columbian Exposition in Chicago in 1893.38 In the World's Fair Commission's final report, he described the collecting and exhibiting of approximately 40 tons of rocks and minerals--all of which was transferred to the mineral department of Field's Columbian Museum in Chicago (now the Field Museum of Natural History) at the close of the Exposition.39 Miller will be discussed in chapter III because of his role in the Oregon State Academy of Sciences--he served as Librarian and Curator from 1906 to 1914.

39Ibid., pp. 73-74.
The push for a museum in Portland came to a fruitful conclusion in 1898 when Lester L. Hawkins (1848-1906) convinced the common council to purchase a local collection of "rare curios and shells." The collection was exhibited in the City Hall and became known as the City Free Museum. Hawkins acted as the initial caretaker from 1898 until his death in 1906. His involvement with the Oregon State Academy of Sciences—a founder and first Librarian and Curator—was influential and will be outlined in chapter III.

The preceding account of the museum movement in Portland exemplifies the growing demand for scientific institutions in the 1890's. As an index of popular science enthusiasm—in this case, natural history—museums provide a definite focus for scientific activities, channeling public involvement and often recognition and support from civic patrons.

Despite the economic depression following the Panic of 1893, Portland was able to pull itself back up to a thriving level during the Klondike Gold Rush in the Canadian Yukon and the subsequent Alaska Gold Rush as an outfitting center for prospectors. Portland endured to become a maturing city with the appropriate cultural facets.

One problem encountered by the various scientific organizations was striveing to maintain an adequate membership for continued

39 Ibid., pp. 73-74


activity. Some organizations, like the Northwestern Ornithological Association, tried to publish their own "official organs," only to fade away due to lack of involvement. The NOA had only about 30 members in 1897.42 A note in the Oregon Naturalist commented on their new meeting quarters in 1897, observing the following:

The city council has recently granted the use of a number of rooms in Portland's beautiful city hall to the scientific societies [sic] of the state. At least one of these will be obtained by our association.43

A meeting convened in January 1897 of representatives of the societies requiring space in the City Hall for the purpose of determining special needs and the idea of uniting all the scientific societies the state or of the entire northwest "was quite favorably considered."44

We might name such a union the "Oregon Association for the Advancement of Science," or ... the "Northwest Association for the Advancement of Science" ...

The societies which have thus far taken an interest in this matter are: The Oregon Academy of Science[s], the Portland Historical Society, the Mazamas, the Mathematical Club, the Forestry Association, and the Northwest Ornithological Association.45

This statement's author, advocating a regional union, claimed:

There are not enough interested in any one of these states, taken seperately [sic], to conduct a live association, but the three [Oregon, Washington, and Idaho] combined could accomplish work of much value to science.46

42Twenty-two names are listed in the Oregon Naturalist 3 (January 1896), p. 6; an additional eight names are given in the Oregon Naturalist 4 (March-April 1897), p. 26.


44Ibid.  45Ibid., pp. 16-17.  46Ibid., p. 17.
Each society would retain its identity as a division of the proposed association and would meet in separate sessions at annual gatherings.

The above suggestion gains new meaning when one considers the relative membership sizes of three of the societies. In 1896 the Mazamas had 146 members and in 1892 the Oregon Academy of Sciences listed 115 names in its Manual for 1892. The NOA, which the author represented, counted only 20%-25% of their totals.47

A few key members from each of these early societies became active in the later Oregon State Academy of Sciences. Martin W. Gorman (1853-1926) was a charter member of the Oregon Alpine Club and the Mazamas. He was a founding member and officer of both the Science Club of Portland and the first Oregon Academy of Science. Gorman also served as secretary of the Forestry Association for many years. L. L. Hawkins was also a charter Mazama and is listed as a member of the Oregon Academy of Science in 1892. James A. Lyman (1866-1926) was a member of the NOA. William L. Finley (1876-1953), a national figure in wildlife habitat preservation, was a charter member and president of the NOA and later a charter member of the John Burroughs Society. He worked as the first president of the Oregon Audubon Society (taking the place of the John Burroughs Society in 1906) for twenty years. These individuals merged during the 1905-1914 period in an earnest attempt to consolidate the scientific energies of Oregon through the State Academy of Sciences.

47"List of Members," Mazama 1 (1896), pp. 130-133; Oregon Academy of Science, Manual for 1892, pp. 18-20. The Mazamas continued to increase their membership, reaching 213 in 1905 and 311 in 1914.
To illustrate how the scientific community changed after 1900, we can consider the twenty-three names listed in the J. McKeen Cattell's *American Men of Science* (2nd and 3rd eds.) of persons belonging to the Oregon State Academy of Sciences. Fourteen of these men arrived in Oregon during or after 1900—nine after 1905. Only one out of the twenty-three was born in Oregon—Herman V. Tartar (1882-1967). But even Tartar went elsewhere for post-graduate education following a B.S. from Oregon Agricultural College in 1902. He attended the University of California from 1902 to 1903, University of Chicago in 1908, and University of Michigan in 1914. He received a Ph.D. in chemistry from the University of Chicago in 1918. The situation of not enough interested persons in the state to support a "live association" seemed to be changing.

Reconstructing the relationship of scientific societies in Portland during the 1890's, one observation is apparent regarding the two devoted to general science. The Mazamas was field-study oriented while the Oregon Academy of Sciences followed the traditional path of scholarly meetings and museum promotion. The Mazamas enjoyed a larger membership and undoubtedly made use of the financial gifts of such prominent members as Henry L. Pittock (1836-1919), publisher of the *Oregonian*; Van DeLashmutt (1842-1921), Portland mayor and financial leader; L. L. Hawkins, banker and Portland visionary; William M. Ladd (1856-1931), banker and son of William S. Ladd (1826-1893) of Ladd and Tilton Bank. Two years

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after the Mazamas were organized, they began publishing a first-class journal entitled Mazama. The club published only six issues through December 1905, but each one stood as a quality enterprise with, for example, articles on plants of certain Cascade peaks or accounts of recent climbs. The December 1914 issue of Mazama contains an elaborated version of their original purposes:

The mission of the Mazamas is important. It is to stimulate in people a love of the mountains and to awaken an interest in the study of them; to disseminate authoritative and scientific information concerning them; to aid and encourage the preservation of the forests and other features of mountain scenery in their natural beauty; and yearly to accomplish something which, besides reflecting credit upon the members, should benefit the world. In this latter regard we have in mind the furthering of the sciences of geography, geology, botany, topography, climatology, and zoology. . . .

To again emphasize the field orientation of the Mazamas, the only persons—male or female—eligible for membership were those who had "climbed to the summit of a snow peak on which there is at least one living glacier, and the top of which can not be reached by any other means than on foot." William G. Steel (1854-1934) was a driving force behind the outdoor emphasis of the earlier Oregon Alpine Club. Steel was elected vice-president of the Science Club of Portland when it formed in 1892. He later assisted with starting the Mazamas and led the club as its first president in 1894.

The Oregon Academy of Sciences, officially established just two years before the Mazamas, gained support from a different


50 "What 'Mazama' Stands For," Mazama 4 (December 1913), p. 79.
segment of the population. As pointed out earlier, each had over 100 members, yet examination of the two earliest membership lists proves that only seven members were common to each. Two of these people, Martin Gorman and L. L. Hawkins, were eventual founders of the Oregon State Academy of Sciences in 1905.

The Academy of Sciences (1892) had its share of prominent patrons also. William S. Ladd appears as the sole "Life Patron" in the Manual for 1892. Other patrons of the Academy were William S. Mason (1832-1899), who was mayor of Portland at the time of the Academy's founding and president of Portland National Bank; and three lawyers, Robert Livingston (?-1927), J. Thorburn Ross (1858-1957), and D. Solis Cohen (1852-1928). The Academy produced a complete publication in 1892 listing its purposes, scheduled programs, constitution and bylaws, and members. The overall purpose was given as "the promotion of science," being broken into four measures:

First - To form a center where those actively engaged in scientific study, or interested in its results, may meet for interchange of thought.
Second - To diffuse a knowledge and love of science by providing lectures on subjects of general scientific interest.
Third - To form a reference library.
Fourth - To form a public museum.


52 Ibid., p. 12. The 1892 Articles of Incorporation states: "The object of said Corporation shall be the advancement of Science and the establishment in the City of Portland of a Museum and Library for the study of its various branches."
The goals of these two organizations were very different. The Mazamas stressed their publication and the Academy of Sciences hoped to establish a physical institution for scientific activities. One succeeded and one failed. The Mazamas is still active today and the Mazama is still being published, although its emphasis has evolved toward topics such as technical rock climbing and snow camping, with little pertaining to science. The Academy's Manual for 1892 carried a plea: "The great need of the Academy is a permanent home. The attention of public spirited citizens is directed to its objects as highly worthy of bequests and financial assistance."53 Since nothing ever materialized for the Oregon Academy of Sciences except its one and only publication, it must be assumed that the patrons of science spent their money elsewhere.

Since its objectives were patterned after other scientific societies in the midwest and eastern states, the Oregon Academy of Science stands as the initial attempt to organize scientific activity along conventional lines in Oregon. More will be introduced about Academy in comparison with the later Oregon State Academy of Sciences (1905-1914).

At the turn of the century, Portland lacked an organization offering general science as its theme. One man, Edmund P. Sheldon, would change that midway through the first decade of the twentieth century. Sheldon arrived in Oregon from Minnesota in 1897. A botanist and forester, he spent the first years in eastern Oregon

53Ibid., p. 9.
working for the USDA Division of Botany as a "special field agent." Sheldon gained recognition for his forestry knowledge when he was placed in charge of the Oregon State Exhibit of Forestry at the Louisiana Purchase Exposition at St. Louis in 1904. "Under his administration, the State of Oregon had the largest exhibit in forestry placed by any state at the Exposition, and on this display Oregon received more awards than any other state competing." As a result of his performance, he was appointed Superintendent of Forestry for the Lewis and Clark Centennial Exposition in Portland in 1905. While working in this capacity, Sheldon arranged the first organizational meeting of what became the Oregon State Academy of Sciences, in February 1905.

The Lewis and Clark Centennial Exposition culminated the cultural flowering of the late nineteenth century in Portland. Open from June 1 to October 15, 1905, the Exposition was the first of its kind hosted in the Pacific Northwest. It was the second held on the Pacific Coast. The Lewis and Clark Exposition signaled the self-confidence of Portland as a leader in the Northwest. Competition between Portland, Seattle, and Tacoma was still great, with each trying to outdo the others in export shipping


55"The Oregon State Academy of Sciences," Portland Sunday Oregonian, 5 March 1905, p. 34.

56Ibid.

57San Francisco sponsored the California Midwinter International Exposition in 1894.
or cultural refinement. Seattle and Portland rivalled for dominance of the region for many years, but as MacColl observed, things began to change in favor of Seattle at the turn of the century. "Seattle's population was fast approaching that of Portland's in 1900, a condition that incited panic and horror in the minds of Portland's business leadership."  

Perhaps the Lewis and Clark Exposition was designed not only to boost settlement and commerce in Portland but to reaffirm its regional supremacy once and for all. When Seattle opened its Alaska-Yukon-Pacific Exposition in 1909—only four years later—it probably served as a counter-celebration in the records, Seattle's population did pass Portland's during the decade one-upmanship game.

The Lewis and Clark fair occurred right in the middle of an exposition mania that swept the United States.

Between 1876 and 1915, the country held fourteen major fairs of international scope, five of which (Philadelphia 1876, Chicago 1893, Buffalo 1901, St. Louis 1904, and San Francisco 1915) qualify as great world's fairs.  

The Centennial Exposition in Philadelphia in 1876 marked the country's entry into the class of national celebrations. But, the world's fair that actually seemed to begin an era of giant expositions was Chicago's World's Columbian Exposition in 1893. The cost attributed to this exposition was the highest for any of the American

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fairs held during the entire period in question--$28,340,700.  

For comparison, the Lewis and Clark Exposition cost a fraction of that amount at $1,440,194.  Much of the financial support for these expositions came from the federal government. Subsidies were enormous: St Louis received the highest amount at $11,427,500.

Expositions became the symbol of technical advancement and national pride. They were also a part of the Progressive Era in America, although the connection here is unexplored.

To host a world's fair was not only a mark of national progress and leadership but also a demonstration of metropolitan influence and pride. Moreover, world's fairs contributed to the growth of urban consciousness and city rivalry by providing an objective focus.

Just as Portland and Seattle fought for regional control, St. Louis and Chicago tried to surpass each other for dominance in the Midwest. When St. Louis hosted its large-scale world's fair ten year's after Chicago's exposition, a similar power struggle was responsible. The Louisiana Purchase Exposition, in 1904, came at an ideal time when the nation was especially proud of its scientific and technological image. "It was in the exhibiting of three wonders..."

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60Ibid., p. 131. Others cited, in order of magnitude, are: Louisiana Purchase Exposition (St. Louis 1904), $26,564,000; Panama Pacific International Exposition (San Francisco 1915), $24,690,770; Centennial Exposition (Philadelphia 1876), $8,980,000; and the Pan American Exposition (Buffalo 1901), $8,860,757.


62Badger, The Great American Fair, p. 132.

63Ibid., p. 19.
of scientific achievement that St. Louis excelled over Chicago. These were automobiles, wireless, and aeronautics."64 One hundred sixty petroleum, electricity, and steam driven autos were exhibited. One car was even driven from New York to St. Louis as a demonstration of its abilities. Wireless telegraphy sent messages an impressive 250 miles to Chicago. The Wright brothers had made their famous flight the year before and Thomas Baldwin's airship, the California Arrow, "made the first successful American dirigible flight from the exhibition ground on 25 October 1904."65

Portland duplicated and elaborated some of these popular events the following year.

On June 21, the winners of the first transcontinental auto race arrived at the fairgrounds to great fanfare; it had taken forty-four days for Dwight Huss and Milford Wright to drive their 800-pound Oldsmobile from Fifty-Ninth and Broadway in New York to Portland.66

Thomas Baldwin continued to stimulate interest in lighter-than-air travel with his two airships Angelus and City of Portland. Together they totalled nine ascents from the fairgrounds with Lincoln Beachey in control.67

A key event at the Louisiana Purchase Exposition was the International Congress of Arts and Sciences held in St. Louis between 19-25 September 1904. Prominent scientists for the U.S.

65 Ibid., p. 113.
67 Ibid.
and many foreign nations convened to discuss important matters in numerous branches in science.68 "Most accounts of the fair considered the international Congress of Arts and Sciences its most important event."69 The Congress was an opportunity for American scientists to host the European scientific community while reflecting on the advancements made by the fledgling scientific community in this country.

Representatives from participating states at the Louisiana Purchase Exposition could not return to their homes without being impressed by the whole enterprise. Edmund Sheldon, possibly after attending sessions of the Congress of Arts and Sciences, may have stimulated interest in developing a scientific organization upon returning to Portland. Sheldon called the first meeting on 4 February 1905 to organize a scientific society.70 A committee formed at this initial meeting "to confer with the Lewis and Clark Centennial Exposition Commission with regard to arranging for a scientific congress in connection with the Lewis and Clark Centennial Exposition."71 Considering Sheldon's involvement with

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71Ibid. The Pacific University Weekly Index (14 February 1905) stated: "One of the immediate purposes of the Academy is to afford means of bringing to the Lewis and Clark Fair a Congress of scientific men and to entertain them while in attendance here."
both fairs, the coincidence is noteworthy. Whether the congress actually took place is uncertain, yet doubtful. A calendar of Exposition events published in June 1905 shows a Scientific Congress scheduled for 5-8 July, but the same calendar published the next month omits it entirely.\textsuperscript{72} Nothing has been discovered referring to this affair. The Academy held regular monthly meetings in June and August, skipping July perhaps in preparation for an enlarged program.

It would be unfair to compare the St. Louis and Portland fairs on an equal basis. St. Louis was a larger city and its Louisiana Purchase Exposition was gigantic. Visitation to St. Louis reached 12,804,000.\textsuperscript{73} The Lewis and Clark Exposition counted a total of 1,588,000 visitors.\textsuperscript{74} The Louisiana Purchase Exposition drew crowds of truly national and international scope; whereas, the Portland event counted 75% of its visitors from Oregon and Washington.\textsuperscript{75} Placing the Lewis and Clark Exposition in the national context of world's fairs leads to the understanding that it was a smaller and more regional display.


\textsuperscript{73}Badger, The Great American Fair, p. 131. Comparing the land area, the Louisiana Purchase Exposition had 1,240 acres, and the Lewis and Clark covered 400 acres.

\textsuperscript{74}Abbott, The Great Extravaganza, p. 54.

\textsuperscript{75}Ibid.
Many host cities carefully planned the structures and location of their expositions to insure later use by the community. Buildings were converted for use as museums or civic centers and exposition grounds became city parks. Portland, however, failed to execute this level of urban improvement. MacColl pointed out that long-range planning was definitely lacking when the site was chosen—and when buildings took their forms. "Although the design of the exposition would succeed in stimulating some subsequent interest in city planning among Portland's citizenry, no lasting model would survive in the tradition of Paris, London, or Chicago."76 In summing up his critique of the Exposition, he stated that "although the exposition was a lively and luxurious show that was thoroughly enjoyed by all who attended, in terms of furnishing some significant vehicle for meeting basic urban needs it proved useless."77 Finally, MacColl assessed the Lewis and Clark Exposition as "a colossal missed chance"78 for Portland.

The only remnant from the Exposition that survived at the site was the massive Forestry Building. In an article published in April 1905, Edmund Sheldon wrote the following:

After studying carefully all the products contained in this wonderful palace, one will be compelled to say: Why tear it all down? Why not keep this splendid exhibit of the resources of a wonderful state as a permanent museum to edify all visitors to Oregon in the future?

76MacColl, Shaping of a City, p. 269.
77Ibid.
78Ibid., p. 270.
It is fortunate that the building is in its materials permanent. Fortunate, too, it is that the legislature of Oregon in session assembled had the wisdom to pass a law allowing the City of Portland, or any association, such as the Oregon Historical Society, the Oregon Grange or the Oregon State Academy of Sciences, to secure the land on which the building stands. The bill instructs the Lewis and Clark State Commission to turn over the building when such arrangements are made, provided that the city or society maintain therein a permanent museum of the historical and natural resources of the State of Oregon.79

Sheldon's role as Superintendent of Forestry may have influenced the decision to salvage the Forest Building. It is also interesting that he specifically mentioned the Oregon State Academy of Sciences, of which he was president, as a potential caretaker of the structure—especially since the Academy was a mere two months old. Martin Gorman, an Academy founder, became the curator of the Forestry Building when the City of Portland took control of it, serving from 1906 to his death in 1926.80 This monument of Douglas-fir logs, the last reminder of the Exposition, burned to the ground in 1964. The present Western Forestry Center opened in 1971 as a continuation of its forestry interpretation.81 The new facility stands not on the site of the Forestry Building, however, but in Washington Park.

Whatever the Exposition failed to achieve in urban planning, it made up for by causing the greatest economic boom in Portland's history, lasting until 1912 or 1913.82 And from the standpoint


80Albert R. Sweetser MSS, Martin Gorman file, University of Oregon Library Special Collections, Eugene.

81The Old Forestry Building (Portland: Western Forestry Center, n.d.), p. 7.

82Abbott, The Great Extravaganza, p. 72
of the financial backers of the Exposition, that is exactly what they had hoped for. "From an examination of the historical records, one must conclude that the dominant motive behind the 1905 exposition was profit. . . ."83

The record is fairly clear. Human greed was the dominant motive in determining the physical shape of the average American city, particularly during the 50 years following the Civil War. Decisions involved choices, but in Portland's case the choices were not difficult. The path of least resistance was the chosen route--hasty decisions based on immediate profit expectation or lowest public expenditure.84

Along with the boosterism and financial rewards of the period was a dedicated effort to civilize Portland. Thomas Lamb Eliot (1845-1936), for example, "was for many years a leading influence in Portland's maturing cultural life."85 Eliot was pastor of the First Unitarian Church and worked actively as director of the Portland Library Association from 1896 to 1925 and as a trustee for Reed Institute from 1904 to 1925. Eliot's overall influence was appreciated even by the Oregon State Academy of Sciences, for on 23 November 1905, George E. Coghill (1872-1941) wrote to Dr. Eliot requesting "the privilege of advising with you regarding certain features of the work of the Oregon State Academy of Sciences."86

83MacColl, Shaping of a City, p. 262.
84Ibid., p. 475.
85Corning, Dictionary of Oregon History, p. 80.
86George E. Coghill to Thomas Lamb Eliot, 23 November 1905, Oregon State Academy of Sciences records, Oregon Historical Society Library, Portland.
By 1905, even the void of higher education in Portland was on its way to being filled. In 1904 Amanda Reed, widow of Simeon G. Reed, died, and her will included an endowment for a college of liberal arts. Reed Institute opened later in 1911, but the planning phase was well under way in 1905. Thomas L. Eliot was responsible for this act of patronage, because he had encouraged the Reeds, who were part of his Unitarian congregation, to lay the foundation for a strong college in Portland.87 "After a study of the region's educational facilities, the General Education Board of New York recommended to the Institute's trustees that they found a four-year 'high quality' college of arts and sciences."88 William T. Foster (1879-1950) came from Massachusetts to become president of Reed College. Foster, a dynamic and foresighted individual, was elected president of the Oregon State Academy of Sciences in 1912 and the college hosted the Academy's 1913 annual meeting. With Reed College in Portland, the city's cultural character became well-rounded. An announcement for laying the cornerstone of Reed College's first building appeared in the Oregonian in 1912, carrying this prophecy: "As this formality will inaugurate a new era in the city of Portland, making it one of the foremost educational centers in America, the Public is cordially invited to attend."89 Coincidentally, William Foster was elected, in absence, president of the Oregon State

87Johansen and Gates, Empire of the Columbia, p. 432. Reed College functions under the formal heading of Reed Institute.

88Ibid.

89Oregonian, 10 May 1912, p. 9.
Academy of Sciences on that day (May 11) during the annual meeting at Oregon Agricultural College in Corvallis.

The rise in population and expansion of commerce and industry in Portland at the close of the nineteenth century ushered in a period of fertile development for many cultural institutions. Among them were a few devoted to science, for the most part natural history. The 1890's saw a trend toward refinement, with museums and clubs as symbols of urban maturity. This stage of growth was capped by the Lewis and Clark Centennial Exposition of 1905--often regarded as a milestone in Portland's history, marking its passage from frontier city to urban metropolis. It was at this point that the Oregon State Academy of Sciences was born.
III. OREGON STATE ACADEMY OF SCIENCES, 1905-1914

George Coghill, Corresponding Secretary for the Oregon State Academy of Sciences in 1905, submitted a report to Science announcing the formation of a new society. It began with the following:

The need of some general scientific organization has for a number of years been keenly felt by a number of teachers of science and investigators in Oregon, who, by reason of their great distance from the scientific centers, are unable to attend the annual scientific convocations and congresses. Many other persons, also, who are not engaged professionally in scientific work have realized the need of organized effort in the interest of the development of the scientific resources of the state.90

A group of "about thirty persons," called together by Edmund Sheldon, met in the rooms of the John Burroughs Society at City Hall to work out the details for the proposed Academy. After two organizational meetings--on February 4 and 18, 1905--the new society had a constitution, bylaws, an official name, and its first set of elected leaders.91

The objective of the Oregon State Academy of Sciences, as stated in the constitution, was essentially threefold:

The purpose of this Academy shall be to encourage scientific research and learning, to promote the diffusion of scientific knowledge among its members and throughout the state of Oregon, and to aid in the discovery and development of the natural resources of the state.92

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91Ibid., p. 118.
To fulfill this goal, the Academy would schedule regular meetings "for the presentation of original papers on scientific subjects and for the discussion of questions which are of scientific interest, and shall publish reports of its proceedings." It also planned to "collect and preserve objects which are of scientific interest," adding the museum dimension to their plans. And finally, the Academy intended to "place itself in communication with other like scientific institutions."

Choosing a name for the society created some controversy, stemming mainly from the insertion or omission of the word "state." "Some felt that the title 'Oregon Academy of Sciences' was of sufficient significance, vouchsafing their opinions from a historical standpoint." Dr. Alpha E. Rockey (1857-1927), president of the earlier 1892 Academy, attended the first organizational meeting but never participated in the new Academy's programs. Three other members of the 1892 society, Dr. James R. Cardwell (1830-1916), Dr. J. Francis Drake (1868-1937), and Cicero M. Idleman (1985-?), came to organizational meetings but never became active in the new Academy. Idleman was in favor of eliminating the word "state" from the name, so the historical standpoint referred to must be linked to the older Oregon Academy of Sciences. Those wishing to keep the word out also felt its addition would lead to a more regional, less

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93Ibid. 94Ibid. 95Ibid.

96"Academy is Formed," Portland Sunday Oregonian, 19 February 1905, p. 16.

restrictive, association in the future. Arguments in favor of adding the word expressed the majority opinion that "the embodiment of the term in the academy's name would greatly aid in advancing the cause of the organization and would assure persons residing in out-lying districts of the State that its field was not confined to Portland." 98 Another observation, wisely addressing the future financial backing of the Academy, pointed out that by adding the word, "the academy might possibly be recognized by the Legislature and materially assisted. . . ." 99 Finally, the precedent set by the Ohio State Academy of Science (founded 1891) influenced the Oregon society to assume a similar name. 100 The vote on this issue was extremely close and may have caused factions to arise which struggled for control later in the Academy's life. When the Academy became legally incorporated in 1910, the name used was Oregon Academy of Science, although the name never became standardized. 101

Edmund Sheldon assumed leadership of the Academy as its first president. Considering his critical part in pulling the society together, this is not surprising. Hendrickson, in his study of the American Midwest, stated: "In most of the Middle Western academies there was a sparkplug, an enthusiastic individual without whom the

98 "Academy is Formed," Oregonian, 19 February 1905, p. 16.
99 Ibid.
100 Ibid. The Ohio State Academy of Sciences changed its name to the Ohio Academy of Science in 1914.
101 For example, the 1912 annual meeting program used Oregon State Academy of Sciences.
organizations would not have persisted in some cases." Sheldon was such a person. He led the Academy for its first three years, 1905-08.

Other initial officers of the Academy included three Vice Presidents: First, Albert R. Sweetser (1861-1940); Second, Arthur B. Cordley (1864-1936); Third, Christina MacConnell (1831-1922). Sweetser was a professor of biology at the University of Oregon, Cordley was a professor of zoology and entomology at Oregon Agricultural College, and MacConnell taught chemistry and physiology at Portland High School.

Two Secretaries and a Treasurer were elected in 1905 also. James A. Lyman (1866-1926) became Recording Secretary while George E. Coghill served as Corresponding Secretary. Martin W. Gorman filled the Treasurer's office. Lyman was a professor of chemistry at Portland Academy and Coghill worked as professor of biology at Pacific University. An early glimpse of Coghill's attitude and temperament comes from his involvement with the committee responsible for drawing up the constitution. The committee's report progressed atypically:

The different articles of the constitution and by-laws were taken up separately and discussed at length. In some instances, Professor G. E. Coghill created much amusement by his references to faulty English and poor phraseology, which he invariably blamed to the stenographer, who, by the way, was Ross Nicholas, the well-known ornithologist. In this manner the monotony of hearing the reading of stereotyped by-laws was greatly relieved.103


103"Academy Is Formed," Oregonian, 19 February 1905, p. 16.
The Treasurer was amateur botanist and collector Martin Gorman, who participated in every science-related organization of the period. He seldom took the commanding role, satisfied with some lower position of responsibility. Later, in 1909, he became president of the Mazamas, his only known executive office.

The last elected officer was L. L. Hawkins as Librarian and Director of the Museum. Hawkins was responsible for the City Free Museum in Portland and had been active for years in banking and other capitalistic enterprises. He had a vision that the City Free Museum would "not only be the finest on the Pacific Coast but the permanent home of the Academy of Sciences." Other Academy members didn't share his enthusiasm. Coghill's second report to Science, dated 22 November 1905 (published 9 February 1906), stated:

> Action has been taken to secure permanent rooms for the academy in Portland. It is expected that adequate quarters will be provided for the library of the academy and for a museum which the academy hopes to acquire as time goes on. The private herbarium of Mr. Edmund P. Sheldon, president of the academy, has been loaned by him for deposit in the academy rooms. This herbarium consists of about 10,000 specimens. It will be properly mounted and made accessible for the work of the academy.

Also, in a reply to Herman Bumpus (1862-?) at the American Museum of Natural History, New York, dated 5 December 1905, Coghill criticized the City Free Museum:

> Permit me to thank you for your suggestion regarding the founding of a museum by the Oregon Academy. This is, indeed, a timely suggestion. The only museum we have in Portland is

104 "The Oregon State Academy of Sciences," Portland Sunday Oregonian, 5 March 1905, p. 34.

105 George E. Coghill, "The Oregon State Academy of Sciences," Science 23 (February 1906), p. 231. The Oregon Historical Society Library has the manuscript copy dated 22 November 1905.
practically a private institution, and is arranged wholly according to the owners [sic] idea of attractiveness. I suspect, however, that by voluntary service, the Academy may be able to effect a re-organization of the collections upon a more scientific plan.106

This sentiment may have been responsible for events transpiring in 1906. L. L. Hawkins died on 11 March 1906 shortly after being re-elected as Librarian and Director of the Museum. One month later, on 12 April 1906, the Portland City Council passed an ordinance creating the "Curator of the City Museum" position, with Edmund Sheldon so designated.107 Sheldon controlled the City Free Museum for three years, resigning his post on 7 September 1909, due to business travel requiring extended absences from Portland.108 Sheldon jointly acted as president of the Academy of Sciences and Curator of the City Free Museum for two years, 1906 to 1908. Charles F. Wiegand succeeded Sheldon as Curator, but his affiliation with the Academy is unknown. Anthony W. Miller took L. L. Hawkins' position in the Academy, but his association with the City Free Museum was minimal. Miller, however, was superintendent of the Chamber of Commerce's Bureau of Information and Permanent Exhibit of Oregon's Resources in the Commercial Club Building.109

106George E. Coghill to Herman C. Bumpus, 5 December 1905, Oregon State Academy of Sciences records, Oregon Historical Society Library, Portland.
107Portland City Council Ordinance no. 15320.
Trustees elected in 1905 were Hawkins, James R. Withycombe (1854-1919), and Edward A. Beals (1855-1931). Withycombe directed the Agricultural Experiment Station at Oregon Agricultural College, and Beals directed the U.S. Weather Bureau District Office in Portland. The Board of Trustees, whose individual terms lasted three years, acted as custodians of Academy property and administered all funds for the organization.  

The collection of elected officers of the Academy included an impressive assortment of college representatives. Hawkins and Beals represented private business and the federal government, respectively. Gorman's special role may have been liaison between other groups. And Edmund Sheldon seemed to symbolize a perfect composite personality, who, as one report noted, "combines practical field knowledge with university training in science." Concerning the dual purpose of the Academy—diffusion and advancement of science—Sheldon was experienced in both areas.

Nine months after the Academy took form, George Coghill sent letters to various prominent scientists in the nation requesting suggestions for projects to be undertaken by the Academy. Seven of these identical letters have survived. They read:

"Dear Sir:

"In the interest of the development of scientific work in the Northwest I take the liberty of calling your attention to the organization of an Academy of Science in Oregon. This Academy was organized last February. It holds regular monthly meetings."

110 Constitution, p. 3. See Appendix B.

meetings in Portland. The attendance upon these meetings has been very encouraging.

"Science workers of the Northwest are compelled to endure isolation from the centres of scientific work. They are deprived, also, of the privileges of scientific congresses and convocations. It is the purpose of the Oregon State Academy of Sciences to fill this need; partially, by unifying the local work, which heretofore has been fragmentary and wholly unorganized; and by bringing our own work, so far as possible, into correlation with the scientific work of the country at large.

"While this is the purpose of the Academy, its plans are in the making, and it is in this respect that we are looking to leaders in science for suggestions and help.

"It is possible that, because of its geographical position, or for other peculiar reasons, the work of the Oregon Academy might be made to contribute in some important way to various lines of scientific inquiry. At any rate, we are trying to plan for just such usefulness, and to that end, we are asking several leading men in different lines of work to point out particular problems to which the Oregon Academy should, in time, contribute in some special manner.

"The Academy would be pleased, therefore, to receive from you a statement of such a problem from the branch of science in which you are particularly interested, together with a full discussion of the problem as you may wish to present. Or, if you would prefer to offer suggestions of a more general nature regarding the work of the Academy they would be equally appreciated.

"If it is your pleasure to contribute to the work of the Oregon Academy in the manner we suggest, it is our wish to consider your contribution at the first annual meeting of the Academy in February. May we not expect something from you?

"Very respectfully,
"George E. Coghill (stamp)
"Corresponding Secretary
"The Oregon State Academy of Sciences"

This effort to get the Academy into the mainstream of American science illustrates Coghill's personal interest and probably the philosophy of many professional members.

Coghill's report of the 1906 annual meeting includes a recommendation made by C. Judson Herrick at Denison University (Granville, Ohio):

The academy has endorsed a plan for beginning a natural history survey of Oregon by formulating check lists of all the museum collections in the state, and of all recorded collections from the state. It is the purpose of the academy to follow these check lists with monographs on various groups as circumstances permit.113

Nothing indicates that the Academy made much progress in this survey, but it may have laid the foundation for a later state natural history survey started by William L. Finley (1876-1953) in 1911 when he became State Game Warden. Coincidentally, Coghill left Oregon in 1907 to work with Herrick at Denison in the field of neurology. His departure left a definite void in the Academy's leadership. Reports to Science ceased and the rigorous spirit that Coghill possessed was apparently difficult to duplicate. Of the Academy founders, Coghill was the only one to gain later national recognition for his work in science.114

Edmund Sheldon was a forester and big changes were occurring in that field in 1905 as a result of the Roosevelt-powered national conservation movement. The Academy, probably as a vehicle for Sheldon's ideas, passed some innovative resolutions calling for improved management of forest resources in the state:


Whereas, the State of Oregon contains within its borders one sixth of the standing merchantable timber in the United States and more than any other State, and,

Whereas, the danger of destruction of Oregon forests by fire and by improper logging methods is of utmost importance to the future welfare of the State, therefore be it

Resolved: First, that this Academy is in favor of a systematic study of Oregon's forests by the United States Bureau of Forestry, and the enactment of a state law in Oregon which will prevent the destruction of these forests by fire and by improper logging methods.

Second, that this Academy is in favor of reforestation of lands in Oregon now denuded of their natural forests by fire and other causes, wherever such land is of more value to produce a crop of trees than it is for agricultural purposes.

It is further resolved that a copy of these resolutions be sent to the United States Bureau of Forestry at Washington, D.C. 115

Overton Price, Associate Forester for the U.S. Forest Service, sent a reply later that year (Fig. 1).

Sheldon's influence in the early days of Oregon forest management was evident again by his selection as Secretary of the newly formed State Board of Forestry in 1907. 116 He resigned this post in 1909, making this his second withdrawal from a major service position, following the Curator's position at the City Free Museum.

For clarification, the Oregon State Academy of Sciences embarked on four projects during its first year: (1) a scientific congress in conjunction with the Lewis and Clark Exposition; (2) a comprehensive natural history survey of Oregon; (3) a library and museum facility (i.e., headquarters); and (4) the special resolutions

115 Forestry Resolutions, Oregon State Academy of Sciences records, Oregon Historical Society Library, Portland. The resolutions were sent to the U.S. Bureau of Forestry, yet technically the U.S. Forest Service replaced this agency on 1 February 1905.

116 Forest History Society, Inc., Santa Cruz, Calif., personal correspondence with Mary E. Johnson, Librarian, 15 April 1983.
Mr. George E. Coghill,
Oregon State Academy of Sciences,
Forest Grove, Oregon.

My dear Sir:

I have the honor to acknowledge, with many
thanks, a copy of the resolutions of the Oregon State
Academy of Sciences. This will be brought to Mr. Pin-
chot's attention promptly upon his return in a few days.
In the meantime, I want to express the keen appreciation
of the Forest Service of the valuable interest shown by
the Oregon State Academy of Sciences in the forest needs
of Oregon, and our hope that the preliminary forest
study endorsed may soon come about.

Very truly yours,

Associate Forester

Fig. 1. Overton Price letter. Note: Permission to copy this
letter was granted by the Oregon Historical Society.
regarding forest management in Oregon. In addition to these activities, the Academy held regular monthly meetings.\(^{117}\)

To emphasize the enthusiasm of the Academy when it was still in its first year, the Executive Council, in November 1905, decided to attempt raising membership by mailing copies of the constitution, along with application blanks, "to a selected list of, perhaps, 1,000 names."\(^{118}\) A letter of invitation, signed by Sheldon, accompanied the materials sent to prospective members:

> Please read over the constitution carefully and seriously consider the benefits to be derived from membership. This is the only Academy of Science on the Pacific Coast, outside of California and it is bound to be a center of scientific thought and activity in the future.\(^{119}\)

The Oregonian had indeed announced the Academy's start with optimism:

> Practically all those engaged in professional scientific work in this state are members of this society, or else have signified their sympathy with its aims. . . . Leading university and college men, representing, as is eminently proper, many diverse branches of science, as well as the state's most important institutions of learning, have been elected officers of the association, and there is every indication that the newly-fledged academy is being built upon sound and broad foundations.\(^{120}\)

The regular meetings of the Academy convened monthly. Through the first year the members gathered in the City Hall building, but eventually the meetings moved to the public library. Scientific

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\(^{117}\)See Appendix E.

\(^{118}\)Minutes of Executive Council Meeting, 10 November 1905, Oregon State Academy of Sciences records, Oregon Historical Society Library, Portland. See also Appendix J.

\(^{119}\)Letter of Invitation, 1 January 1906, Oregon State Academy of Sciences records, Oregon Historical Society Library, Portland.

\(^{120}\)"The Oregon State Academy of Sciences," Oregonian, 5 March 1905, p. 34.
papers and lectures stimulated discussions and satisfied the requirements of the constitution. Papers tended to be a mixture of popular and technical themes, and the presentations were always open to the public. The year 1905 is well-documented for its monthly meeting presentations, totalling seventeen. Some title examples are:

- The Bacteriology of Water
- The Taste Organs of Vertebrates
- Forestry in the United States
- The Precipitation of Barium Bromide by Hydrobromic Acid
- Curing and Mounting Wild Flowers
- General Motions of the Atmosphere
- Prelocalization in the Egg and Correlated Development

The year 1905 was especially significant because the Lewis and Clark Exposition brought a few outstanding non-Oregon scientists to Portland. Three of these people were guest speakers at monthly meetings of the Academy. Frank Lamson-Scribner (1851-1938), in charge of exhibits for the USDA's Bureau of Plant Industry, spoke on "Agriculture in the Philippines." Marcus W. Lyon (1875-?), Chief Special Agent for the Smithsonian Institution and National Museum, addressed the Academy with "Mammals of Oregon." Elda R. Walker (1877-?) of the University of Nebraska presented a paper titled "The Development of the Ovule and Pollen Tube in the Oregon Grape." These papers were given at the June and August monthly meetings, perhaps as remnants of the proposed scientific congress planned for July.

The only other non-Oregon speaker ever to make a presentation was Alden Sampson (?-?) of Washington, D.C., who gave a talk on

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121 See Appendix F.
"Animals of Mt. Rainier National Park" in January 1906. For the remainder of the Academy's existence all meetings scheduled Oregon scientists for presentations.

The annual meeting became the Academy's primary function following its initial one on 17 February 1906. A newspaper report of this meeting claimed the Academy had 87 active members up to that point. The main activities of these meetings were delivering scientific information and electing officers for the coming year. The papers throughout the 1906-1913 period appear to be of the same quality as those given at the monthly meetings. However, without actual texts for comparison, this is mere speculation based solely on titles. The number of papers devoted to social issues is worth noting since they comprise a substantial proportion of the total papers presented. Out of a total of 99 papers (from all meetings, monthly and annual) fully one-quarter (26) covered areas of non-scientific concerns. The Reed College Archives contain information claiming that the 1913 annual meeting occurred in connection with a "Conference on the Conservation of Human Life." Examples of titles, from various meetings, are as follows:

Purification of Polluted Waters
Irrigation and Conservation
State and National Conservation
Esperanto
Legislatures Under the New System
Vivi-section--Is It Justifiable?

122See Appendix E. Five annual meeting programs were discovered and appear in Appendix I.


124See Appendix B.
Science, as the members viewed it, included the social sciences as well as the physical and natural sciences. This condition may have weakened the conventional science aspect to a point where the researchers relinquished their support. Chapter IV will develop this idea further.

In 1908, the Academy of Sciences left Portland for the first time to hold the annual meeting at Oregon Agricultural College in Corvallis. Migratory annual meetings became the accepted practice following this precedent. Pacific University hosted a "Semi-Annual" meeting in Forest Grove in 1909; the Commercial Club in Portland was the site for the 1910 meeting; Albany College, Albany, entertained the Academy in 1911; the 1912 annual meeting returned to Oregon Agricultural College; and the final annual convention, in 1913, met at Reed College.

The number of papers presented at the various annual meetings follows a crude bell curve. In 1908, 10 papers were given and for 1909 the number rose to 16 total. The number of presentations hovered around 15 per year until 1913 when it dropped to the lowest recorded level, 8 papers. The Academy was clearly declining in terms of active meeting participants by 1913.

Newspaper coverage in Portland of the annual meetings disappeared after the brief article concerning the 1906 meeting in

125 This meeting took place in the fall and the author has reason to believe an earlier, spring meeting--either an annual or semi-annual meeting--occurred in Salem. (See Frank W. Power to Henry D. Sheldon, 15 January 1910, Oregon State Academy of Science records, Oregon Historical Society Library, Portland).

126 See appendices E and I.
Portland. It was not until 1911 that the Oregonian began detailed reports of annual meetings. In fact, the 1911 meeting in Albany was the best documented of all the Academy's annual gatherings, aside from the meeting programs themselves.

One prepared talk at the 1911 meeting deserves special attention due to its theme. A. W. Miller gave an inside view of the Academy's philosophy at that point in an address titled "The Oregon Academy of Sciences, Its Scope and Objects." The Oregonian reported segments of Miller's speech:

He recited the history of the organization of the academy and told of its purpose to make popular the study of scientific subjects in Oregon and especially those subjects of peculiar interest to this state. "Many people have the idea," he said, "that this academy is an organization only for prominent scientists and educators, but such is not the case, as it is formed to afford everyone an opportunity to study and discuss matters of every-day importance. In fact, one of the primary purposes is to afford those who have not had the advantage of a college education an opportunity to become better acquainted with subjects studied at college and it desires to represent the higher branches of education along all lines and at the same time be more closely in touch with the masses than the high school, college, or university."127

Miller, speaking of the beginning of the Academy, said it "had its origin in the desire of a few of our most progressive citizens, who realized the fact that modern times demanded modern methods..."128

He continued with a view of the Academy's cultural offerings:

No line of effort could produce more for the advancement of our people than a "clearing-house" of new ideas, one that would be a center from which would radiate social and educational influences which would aid all public and private

128 Ibid.
agencies in bringing about improved conditions in our educational system and put an end to any special privileges.129

Miller was not attached to a collegiate institution and had no known college degree, so as an amateur geologist his final comments are particularly worth paying attention to:

Many of our best educated people today are those who were denied school facilities, but have educated themselves by cultivating their intellect and doing their own thinking. On the other hand many college-bred people have lost the advantages of their schooling by not knowing how to combine theory and practice and making the best use of their minds, it being usually the case that where money is too liberally expended to secure advantages for any individual, he is apt to depend upon money to do all for him while he sits down quietly and lets his opportunities pass because he has allowed his intellect to rust and his brain to go to seed for want of cultivation.130

The Academy's leadership still boasted a majority of college graduates and professors, so Miller's remarks may have mirrored a growing tension between the college and non-college participants. Perhaps not coincidentally, Joseph D. Lee (1848-1931) was just ending his term as Academy president. Lee was the only president without a college education in a scientific field. His age and developmental interests meshed well with Miller's—they were very similar individuals.

While Lee served as president, the Academy became legally incorporated. Why the society waited five years to do so is uncertain. Three officers are listed as incorporators: J. D. Lee, A. W. Miller, and Frank W. Power. Power's identity is almost a complete mystery. He served the Academy as Secretary-Treasurer

129Ibid. 130Ibid.
in 1909-1910, then as Secretary from 1910-1912.\textsuperscript{131} His employment is known to have been with Power Real Estate in Portland.\textsuperscript{132} And in 1910 he was Secretary of the Oregon State Horticultural Society.\textsuperscript{133} On 18 August 1910 these three men succeeded in formally incorporating the Oregon Academy of Science—a name change that is not mentioned anywhere in the Academy's records. It may be significant that the three leaders—Lee as President, Power as Secretary, and Miller as Librarian and Curator—were all amateur scientists.\textsuperscript{134} They were also Portland residents, which may explain a shift in purpose of the Academy:

\begin{quote}
The purpose for which the Corporation is constituted is promotion of scientific education by gathering together through periodical and migratory meetings, all those in our community who are interested in the acquirement and development of knowledge for the betterment of mankind through the observation of natural phenomena and by creating a means of intercourse between those devoted to nature study, in aiding and encouraging their efforts in the prosecution of original investigations along scientific lines, and by collecting, preserving and exhibiting in museums, natural history objects
\end{quote}

\textsuperscript{131}See appendices B and C.


\textsuperscript{133}Ibid., 1910, p. 94.

\textsuperscript{134}The appearance of three other signatures on the Articles of Incorporation is interesting. On the final page, the bottom is folded and pasted, bearing the names of Power and Miller. But faintly visible through their signatures are those of William N. Ferrin, John F. Bovard, and Herbert S. Jackson. These men were First, Second, and Third Vice Presidents and represented Pacific University, University of Oregon, and Oregon Agricultural College, respectively. The fact that the three official incorporators were all non-college men in Portland leads to questions about the direction of the Academy in 1910. See Appendix H.
which are of scientific interest, so as to provide material that will assist in scientific investigation and public instruction through the diffusion of knowledge.\textsuperscript{135}

Interpretation of this collective purpose for the Academy shows a definite swing toward natural history as the primary focus and a community--meaning Portland--perspective rather than the previous state-wide emphasis. The last four presidents of the Academy, including Lee, were from the Portland area--three from Portland itself and one from Forest Grove.

An especially curious aspect of the Academy's incorporation is that the "estimated value of its property and money" was given as "nothing."\textsuperscript{136} One would expect that after five years of activity the Academy would be able to count something in its treasury. Even Academy property--books or specimens--would have some appraised value. If this was a true assessment of the Academy's worth, it is not hard to understand why the organization never produced any important publications or any other substantial evidence of its existence.

When Oregon Agricultural College hosted the 1912 annual meeting, the institution's president, William J. Kerr (1863-1947),

\textsuperscript{135}Articles of Incorporation, Article II, pp. 1-2, 18 August 1910, Corporation Division Documents (Acc. No. 78RC-60 Item 1, File No. 15072), Oregon State Archives, Salem. The 1892 Oregon Academy of Sciences dissolved on 6 August 1910 to allow the new Academy to incorporate. A letter surrendering the old name appeared on the new Academy's letterhead and was signed by Alpha E. Rockey and Martin Gorman, former officers (President and Assistant Librarian, respectively) of the first Academy.

\textsuperscript{136}Certificate of Filing and Recording Articles of Incorporation, Oregon Academy of Science, 18 August 1910, Corporation Division Documents (Acc. No. 78RC-60 Item 1, File No. 15072), Oregon State Archives, Salem. See Appendix H.
welcomed the assembled Academy. His remarks, if accurate in their 
evaluation, outline the Academy's hopeful role in the Oregon 
scientific community. According to the Oregonian,

W. J. Kerr . . . extended a cordial welcome to the 
academy. He contrasted the field of respective endeavor 
of the two institutions. The college dealt more directly 
with science as related to practical things, he said, 
while the academy dealt with pure science and its 
diffusion.

President Kerr expressed wishes for the success of 
the academy and hoped that it would continue to gain in 
strength and influence and become a more potent factor 
in the field of investigation than it had been in the 
past.137

Six months later, Herbert S. Jackson (1883-1951), Professor of 
Botany and Plant Pathology at Oregon Agricultural College, wrote 
to William T. Foster, President of the Academy:

... I am in most hearty accord with your plans to devote 
the Academy exclusively to science. I believe that the 
reason the society has not had better support from those 
whose work is pure science in the State has been because 
of the numerous popular and sometimes unscientific papers 
which have been read at its annual meetings.138

These accounts give the impression that research was an area the 
Academy should have been actively promoting. But these views 
indicate that the Academy had failed to launch into any important 
research programs. This condition may have contributed to the dis-
integration of the Academy around 1913. Consequently, it supports 
the conclusion that the Academy's actual control was in the hands of 
the non-professionals.

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137 "Science School Meets," Portland Sunday Oregonian, 
12 May 1912, p. 12.

138 Herbert S. Jackson to William T. Foster, 26 November 
1912, W. T. Foster MSS, Reed College Archives, Portland, Oregon.
It will be fruitful to study the participants at this point because the individuals taking part in the Academy were essentially the substance of the organization. Membership categories were given in the constitution as:

ACTIVE: Residents of Oregon interested in science.

CORRESPONDING: Non-residents who further the objects of the Academy by the presentation of original papers for publication, donation of specimens, etc.

HONORARY: Persons who have attained distinction as investigators and who personally aided the Academy.

LIFE MEMBER: An active member who donates $25 at one time.

PATRON: Any person donating $500 or its equivalent.

Active members were required to pay $2.00 each year to remain in the Academy.

A complete membership roster has not been discovered by the author. However, from the names appearing in meeting programs, newspaper articles, correspondence, minutes, and special reports, persons connected with the Academy have been compiled. Since the actual membership status is unknown, a listing of 104 names has been broken down by levels of participation as follows:

LEADERS (officers, trustees, committee members): 46

RESIDENTS PRESENTING PAPERS ONLY: 40

NON-RESIDENT GUEST SPEAKERS: 4

RESIDENTS PRESENTING WELCOMING ADDRESSES ONLY: 3

NAMES ONLY MENTIONED, NO ACTIVE PARTICIPATION: 11

Twenty-eight of the 46 leaders also presented papers--Albert Sweetser gave a total of six himself--which separates them into a special "most active" category. Nineteen of the individuals were

employed by colleges or universities, and four worked for government agencies. Fourteen are listed in *American Men of Science* (2nd and 3rd eds.) and 13 (with 10 overlapping) appear on a listing for members of the Pacific Division of the American Association for the Advancement of Science (AAAS) in 1914. Six of these scientists were Fellows of the AAAS—Theodore D. Beckwith (1879-1946), William P. Boynton (1867-1955), William T. Foster, Frank L. Griffin (1881-1969), Edmund P. Sheldon, and Harry B. Torrey (1873-?)140

Coincidentally, the total number of resident active participants (leaders plus residents presenting papers only) was 86, nearly the identical figure recorded at the 1906 annual meeting, which was 87.

Only one person has been recorded as being a member from a special, non-active member, category. Marcus Lyon from the Smithsonian, who spoke at a monthly meeting in 1905, was given Honorary Membership in the Academy.

If the Academy of Sciences is to be understood, the active participants must be analyzed in terms of their occupational affiliations and professional status. The separation of the members into various occupation types shows the dominant area (50%) to be in higher education (Table 1). Eight colleges and universities, all in the Willamette Valley, were represented—Oregon Agricultural College, 16; University of Oregon, 8; Pacific University, 7; Reed College, 3; Albany College, 3; Willamette University, 3; Philomath College, 1; Pacific Division AAAS records, W. T. Foster MSS, Reed College Archives, Portland.
### Table 1

**Occupational breakdown of membership using three participation categories**

<table>
<thead>
<tr>
<th>Occupation Type</th>
<th>Resident Active Participants</th>
<th>Leaders</th>
<th>Presented Papers Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>College or University Professor&lt;sup&gt;a&lt;/sup&gt;</td>
<td>43</td>
<td>25</td>
<td>18</td>
</tr>
<tr>
<td>Medical Profession</td>
<td>11</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Government Agency&lt;sup&gt;b&lt;/sup&gt;</td>
<td>9</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Private Enterprise</td>
<td>9</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>High School Teacher</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Legal Profession</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Minister</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Unknown</td>
<td>9</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>87</strong></td>
<td><strong>47</strong></td>
<td><strong>40</strong></td>
</tr>
</tbody>
</table>

**NOTE:** A. L. Knisely (1865-1943) is counted twice—under college/university professor and government agency.

<sup>a</sup>Includes Portland Academy.

<sup>b</sup>Includes Oregon Historical Society.
and Portland Academy. The institution with, by far, the most participants was Oregon Agricultural College, in Corvallis, with twice the number of second-ranked University of Oregon. Part of the reason for this was the location of the state Agricultural Research Station at OAC in Corvallis.

When the leadership alone is examined, there is a slight shift in favor of the college and university participants to 53%.

Another significant observation regarding the membership is that most of the non-Portland participants were affiliated with collegiate institutions. This unbalance may have helped create a faction of non-Portland "college members" who threatened the Portland-based amateurs.

The high degree of participation by college and university presidents was also important. William N. Ferrin (1854-?) of Pacific University, Prince L. Campbell (1861-1925) of University of Oregon, William T. Foster of Reed College, and Harry M. Crooks (1869-1962) of Albany College all served as leaders of the Academy. Ferrin and Foster were elected president also. The top officials from three other institutions were involved to a lesser extent. William J. Kerr of OAC has already been mentioned. Fletcher Homan (1868-1949) of Willamette University and O. V. White (?) of

141 See Appendix G. William Cusick (1845-1922) is included in the University of Oregon count because he is given this affiliation on a meeting program. He was actually from Union in northeastern Oregon.

142 See Appendix B.

143 Kerr's listing in Who's Who in America (1912-1913) includes his membership in the Academy of Sciences.
Philomath College both presented papers at the 1910 annual meeting in Portland. The Academy of Sciences must have signified an important organization to have warranted the strong support of these men. At one point in the Academy's history, in the 1911-12 period, the three top offices were filled by Ferrin, Foster, and Crooks.

Eight women became involved in varying degrees, three of whom served as leaders.\textsuperscript{144} Christina MacConnell, mentioned earlier, was elected Third Vice President at the founding of the Academy in 1905. This was her only known contribution. Jane Stearns, another teacher at Portland High School, was likewise elected Third Vice President in 1912. Miss Stearns, however, presented a paper in 1910 and sat on the Resolutions Committee (1910-11, 1912-13) and Program Committee (1911-12). Mary F. Farnham (1847-1942) was a Professor of English Language and Literature at Pacific University. She gave two papers, in 1908 and 1909, and served on the Nominating Committee (1909-10, 1910-11) and Program Committee (1909-10). Her active period was between 1908 and 1911, after which she faded from view. All three of these women were unmarried.

The growing national trend toward professionalization during the nineteenth century began to affect Oregon at the start of the twentieth century. Twenty-three Academy members are listed in \textit{American Men of Science} (2nd and 3rd eds.) with twenty-one being college professors. The average age of these men in 1905 was 33 years. There is a definite peak in birth years between

\textsuperscript{144} Oregon passed a woman suffrage bill on 5 November 1912, so for most of the Academy's life women had unequal status in society.
1870-1874. The average date of arrival in Oregon for the twenty-two who were not born in the state was 1901. Regional origin based on place of birth lends weight to the argument that a procession of culture occurred westward—twelve of these men were born in the Midwest; seven came from New England.

On the opposite side of the spectrum, if the more prominent amateur scientists are examined, it becomes apparent that they indeed came from an earlier generation and tradition. Men such as James G. Crawford (1850-?), William C. Cusick (1845-1922), John Gill (1851-1929), Martin W. Gorman (1853-1926), L. L. Hawkins (1848-1906), J. Linsey Hill (1845-1919), George H. Himes (1844-1940), and A. W. Miller (1842-1923) established reputations as naturalist-collectors before the influx of professional scientists. They had migrated to Oregon as pioneers or settled as early residents of the state following the scientific practices as pastimes.

Coupled with an increase in employment possibilities at educational institutions, government labs and agencies provided work for new professionals. Many of the Academy members had technical or scientific positions with such agencies as the U.S. Weather Bureau, U.S. Forest Service, State Game Commission, U.S. Food Laboratory, Portland Analytical Laboratory, and U. S. Department of Agriculture.

The Oregon State Academy of Sciences began to display signs of distress in 1912. When William T. Foster became president in May 1912, he was absent from the annual meeting. Edmund Sheldon wrote to him in October of that year, questioning the lack of
monthly meetings "during the past six months." Foster's reply indicates a severe breakdown in communication within the Academy:

On my return to my offices [sic] today after a month in the East, I find your kind letter. I am sorry if my necessary absence has delayed the plans for the first fall meeting of the Oregon Academy of Sciences. I learned thru the newspapers that I had been elected president of the Oregon Academy of Sciences, and I thought some of the previous officers would tell me in due time what was expected of me. I have never seen the constitution and do not know what it calls for.146

With the Academy's primary leader completely ignorant about the organization, poor results were inevitable. Together with Herbert Jackson's comments on minimal support from the research scientists, 1912 was obviously a period of disintegration for the Academy of Sciences.

If Edmund Sheldon's involvement is recognized as crucial to the Academy's momentum, then his departure in 1909 surely triggered a slow decline for the organization. From his record of resignations in that year and his private business affairs in California,147 the absence of Sheldon from Portland between 1909 and 1912 adversely affected the organization. Sheldom became visible again in Portland in 1912 and apparently sensed the poor condition of the Academy.

145Edmund Sheldon to William Foster, 17 October 1912, W. T. Foster MSS, Reed College Archives, Portland.

146William Foster to Edmund Sheldon, 11 November 1912, W.T. Foster MSS, Reed College Archives, Portland. This response is a little puzzling due to another letter in the same file from Jane Stearns to Foster dated 24 May 1912. Her letter outlines the president's duty to appoint committees and offers her assistance during the summer months when the Academy normally was inactive.

147American Men of Science (J. McKeen Cattell, ed., 2nd ed., 1910) lists his residence as "Beckwith," California. This is probably Beckwourth, about 45 miles north of Lake Tahoe.
When Sheldon wrote to William Foster in the fall of 1912, his desire to maintain the Academy was evident: "As I am one of the charter members of the Academy of Sciences I am naturally interested in it's [sic] success..."\textsuperscript{148} In contrast, Sheldon was elected president of the Mazamas that year.

A conflict between the professional scientists and amateur cultivators finally erupted in 1914 at a monthly meeting. Reminiscent of A. W. Miller's speech about the college and non-college differences, Jane Stearns wrote to William Foster complaining that only five persons, including the president and speaker, attended the 25 April meeting. She continued:

\footnotesize{I met Mr. Lee and learned little except that the boycott [sic] was probably called because the non college men in the Academy feared they were to be dominated by the college professors. . . .} \textsuperscript{149}

The meeting referred to was the last known gathering for the Academy. Other signs of weakness occurred around this time also. Frank Power resigned as Secretary and Sheldon stepped into that office in 1913. In the same letter referred to above from Jane Stearns, she made a foreboding statement about the financial operation of the Academy.

\footnotesize{Mr. Knisley [sic], the treasurer is in Seattle and he left the materials he had with me, with the instruction that I turn them over to the new treasurer. I refused to take fees, and that, I believe, amounted to a refusal to send out notices of dues. The money is still in Mr. Knisley's [sic] hands and if the organization is to continue provision must be made this spring for an annual election.} \textsuperscript{150}

\textsuperscript{148}Sheldon to Foster, 17 October 1912.
\textsuperscript{149}Jane Stearns to William Foster, 30 April 1914, W. T. Foster MSS, Reed College Archives, Portland.
\textsuperscript{150}Ibid. Abraham L. Knisely (1865-1943).
This problem may have acted as a final catalyst, causing the Academy to cease functioning. Regardless of the mechanism, the Academy indeed halted in 1914.

At the exact time the Oregon State Academy of Sciences was in its death throes, the Pacific Division of American Association for the Advancement of Science (AAAS) was being planned. Organized in San Francisco in 1915, the Pacific Division of AAAS was actually a formalized link of the earlier Pacific Association of Scientific Societies (PASS), which began in 1909.\textsuperscript{151} A question emerges as to why the Oregon State Academy of Sciences never became affiliated with PASS.\textsuperscript{152} The constitution includes a provision regarding the Academy's communication with other scientific societies, so the omission from PASS is odd. The Academy of Sciences did have known dealings, however, with two state organizations--the Oregon Forestry Association and the Oregon Philosophical Society.\textsuperscript{153}

\textsuperscript{151} Michele L. Aldrich, "Records of the Pacific Division of the American Association for the Advancement of Science 1909-1981," AAAS Archives, January 1982.

\textsuperscript{152} Ralph S. Bates, Scientific Societies in the United States, 3rd ed. (Cambridge, Mass.: The MIT Press, 1965), pp. 126-127. The twelve constituent societies were the Biological Society of the Pacific Coast, the Pacific Coast Paleontological Society, the Cordilleran Section of the Geological Society of America, the Seismological Society of America, the Astronomical Society of the Pacific, the Technical Society of the Pacific Coast, the Cooper Ornithological Club, the California Academy of Sciences, Puget Sound Section of the American Chemical Society, the Pacific Slope Association of Economic Entomologists, the San Francisco Society of the Archaeological Institute of America, and the San Francisco Section of the American Mathematical Society.

\textsuperscript{153} The January 1909 issue of The Timberman ("Oregon Forestry Association," p. 32M) carried an article with information about committees formed "to confer with the State Horticultural Society and the Academy of Sciences with a view of securing their co-operation..."
Another function of the Academy was supposed to be the publication of reports and papers in a Proceedings or Transactions of the organization. The constitution specified this and continual references to the need for such publication emerged throughout the Academy's existence. Thinking of Hendrickson's guide to the success or failure of an academy, the publication program was crucial to a healthy society. Edmund Sheldon, at the first annual meeting in 1906, when he was re-elected president, was "in favor of the academy issuing a quarterly publication, to contain the various papers read from time to time before the body, together with such other papers as may be received from outside sources." No evidence of such a series of publications is known.

Six years later, in 1912, William Ferrin again tried to get the proceedings moving. Writing to William Foster, he made this plea:

I labored earnestly during the last year in preparing a program for the annual meeting to secure the cooperation of some of the science men connected with the colleges of the state and succeeded very well. The program at the annual meeting was, I think, rather better than those of previous meetings. Some of the papers are worth preserving. The By-laws provide for the appointment by the president of a committee on publication, and I am a good deal interested that the work of the past year may be properly closed up by the publishing of such of these papers as may be found worthy.

Martin Gorman was the liaison between the Association and the Academy. In a letter dated 15 January 1910, Frank Power asked Henry D. Sheldon (1874-1948) at the University of Oregon about scheduling a joint meeting between the Academy and the Oregon Philosophical Society of which Sheldon was president (Oregon State Academy of Sciences records, Oregon Historical Society Library).


155William N. Ferrin to William T. Foster, 20 May 1912, W. T. Foster MSS, Reed College Archives, Portland. Also, one year earlier,
Unfortunately, the only paper to be published appeared not in an Academy proceedings but in the Oregonian

According to the 1905 constitution, the Corresponding Secretary had responsibility over publishing an Academy proceedings. George Coghill did attempt to compile papers from the authors in 1905, but nothing else is definite. Coghill was also the Academy's only Corresponding Secretary—the office disappeared when he departed Oregon in 1907. Apparently the Publication Committee alone could not orchestrate this program.

Factors contributing to the failure of the Oregon State Academy of Sciences are probably more complex than can be interpreted here. But, five key elements were most likely responsible for its demise. When Sheldon left Oregon temporarily in 1909, none of the remaining leaders could fill the gap. Hendrickson's "sparkplug" idea held true. Following Sheldon's departure, the Academy experienced a shift in leadership and purpose. Joseph Lee as president and the Academy's incorporation in 1910 attest to this. The continuous strained relationship between the professional, college-based scientists and the older generation of naturalists undoubtedly eroded the foundation of the society. From Coghill's early critical review of the constitution to A. W. Miller's references to "college-bred" advantages, the

the Oregonian (30 April 1911, p. 6) reported on the 1911 annual meeting and claimed the Academy would "take steps to have all papers presented at this meeting printed in pamphlet form and preserved in the library of the Academy."

156 "Solid Bodies Which Whiz Through Space Are Puzzle to Scientists," Portland Sunday Oregonian, 2 June 1912, sec. 2, p. 6. This article was a reprint of A. W. Miller's paper on the Willamette Meteorite.
cooperation between these factions was less than ideal. Two last
critical omissions--the lack of a viable publication program and
a designated headquarters--left the Academy without a solid identity.

The number of professional scientists in Oregon was probably
still too few and perhaps too young to control the overall direction
of the state's scientific community. In a statement made in the
Oregon Naturalist in 1897, the article's author admonishes the
conditions where too few people lived in Oregon "to conduct a live
association."157 A regional organization was proposed instead
of one restricted to each state in the Northwest. Perhaps the
recognition of a sparse population led to two regional scientific
societies that began within a decade of the Academy's collapse and
continue to thrive--the Pacific Northwest Bird and Mammal Society
began in 1920 and the Northwest Scientific Association started in
1923. Both published journals, Murrelet and Northwest Science,
respectively, shortly after their founding.

In 1943 a third state academy of science became established
in Oregon, responding to both the larger and older population of
professional scientists and World War II. This attempt was
successful and the Oregon Academy of Science continues to function
today.

The final chapter will present an evaluation of the Academy's
significance as an institutionalizing force in Oregon science.

157 "The Society's New Quarters," Oregon Naturalist 4
(February 1897), p. 16. Also, in a letter written by Theodore C.
Frye of the University of Washington to George Coghill in November
1905, Frye commented on the number of professional scientists in the
Northwest: "We are too few out here yet." (Oregon State Academy of
Sciences records, Oregon Historical Society Library, Portland).
IV. SIGNIFICANCE OF THE O.S.A.S.

The accumulated evidence discussed proves that the Oregon State Academy of Sciences functioned as a transitional, yet short-lived, scientific organization. In comparison with the earlier Oregon Academy of Science (1892) and the later Oregon Academy of Science (1943), a definite process toward professional representation occurred. The Oregon State Academy of Sciences was a blend of professional and amateur, making its program subject to stress by the two polarized factions.

The Academy was also a microcosm to some extent of the scientific attitudes prevalent during the Progressive Era, 1890-1917 (approximately). The reform tendencies did not approach Oregon until the turn of the century and the conservation movement spawned during this period had an effect on the Academy via Edmund Sheldon. It is conceivable that a forestry issue served to stimulate the Academy's founding along with the Lewis and Clark Exposition:

In the spring of 1905, Portland was caught in the swirl of two conflicting currents. One embodying energy, confidence and hope, was generated by the city's boosters in preparation for the June 1st opening of the exposition. The other, combining elements of fear, anger, and despair, was a direct consequence of the timber fraud trials.

The illegal accumulation of forest lands by large companies using bogus homesteaders was a regional scandal of huge proportions.

158 See Appendix K.
159 MacColl, The Shaping of a City, p. 298.
The increased awareness and concern for forest management obviously influenced Sheldon, who was responsible for the Resolutions sent to the U.S. Forest Service in 1905. Conservation of natural resources and science were especially linked during the Progressive Era.

In the sense that it was scientific, conservation arose from the certain tendencies within western industrial society--tendencies that convinced the more far-seeing, scientifically-trained people to concern themselves with the kind of planning that would lead to the efficient development and use of all natural resources.\footnote{William G. Robbins, The Early Conservation Movement in Oregon, 1890-1910 (Corvallis: Oregon State University, 1975), p. 5.}

George Daniels supported this by saying "nothing marked the Progressive movement more than its interest in 'efficiency' and its identification of science with efficiency."\footnote{George H. Daniels, Science in American Society: A Social History (New York: Alfred A. Knopf, Inc., 1971), p. 308.} The Academy's purpose included "the discovery and development of the natural resources of the state."\footnote{Constitution, p. 2.} In 1913 the Academy of Sciences endorsed the creation of a new state agency to develop mineral resources:

> The officers of the Oregon Academy of Sciences, regularly incorporated under the laws of the State of Oregon, believe that the bill presented to the legislature for the operation of a State Bureau of Mines and Geology for Oregon is in the interest of the advancement of science, and for the promotion of the industrial prosperity of the State of Oregon.\footnote{Bureau of Mines and Geology endorsement, 21 January 1913, W. T. Foster MSS, Reed College Archives, Portland.}

Henry M. Parks (1872-1945) and Harold N. Lawrie (1883-?) were Academy members and geologists who were instrumental in establishing the new
Bureau. Lawrie, shortly after the endorsement by the Academy, was elected its last president.\textsuperscript{165}

Another facet of the resource development and conservation issue was the need for accurate information regarding the natural resources of the state. The Academy proposed in 1906 to conduct a natural history survey of the state but nothing is certain about its completion. However, in 1911, when William L. Finley became State Game Warden, the State Game Commission authorized a comprehensive survey of the state's wildlife resources. Finley had been an active member of the Academy at least as early as 1908, when he presented a paper on the Three Arch Rocks Bird Refuge at the annual meeting.\textsuperscript{166} He also served as chairman of the Committee on Academy Property in 1913. By that year the federal government was involved in the natural history survey:

In 1913 a cooperative survey was undertaken by the U.S. Bureau of Biological Survey, University of Oregon, Reed College, Willamette University, Oregon State College, and State Board of Fish and Game Commissioners. All agencies assisted with field men and equipment.\textsuperscript{167}

The increase in governmental support for scientific or resource management functions definitely occurred through the first decade of the twentieth century in Oregon, coinciding with the influx of professionals and the formation and life of the Academy of Sciences.

From a broad standpoint, the Oregon State Academy of Sciences was a manifestation of various forces working in Oregon at the start

\textsuperscript{165}See Appendix B.

\textsuperscript{166}See Appendix F.

of this century. It came about partially as a result of the general trend toward professionalism, especially in higher education and government science. That the only Honorary Member ever elected by the Academy was a scientist at the Smithsonian Institution reveals something about the times.

The Academy was also a child of the exposition movement across the nation and its boosting of science and technology for a great America.

Another aspect of the Academy's rise stems from the total culture concept for any city. Portland was maturing culturally and its citizens compared their local society with that of other urban centers. Choosing to support a significant scientific society was something Portland failed to do, unlike San Francisco, for example. Portland's patrons were satisfied with their art and history institutions and seemed to ignore science as a whole.

The role of the Academy on a statewide basis is a different matter for consideration. Since it only lasted nine years, it could hardly muster the strength of a major institution, but its mission to unify the scientific community of the state—or in reality, the Willamette Valley—was a worthy effort. The meetings hosted by various institutions indicate there was a strong desire to keep a statewide appeal, rather than a society headquartered strictly in Portland. The information presented at the meetings also was general and popular enough to reach the public audiences, who welcomed it heartily. Perhaps this function was similar to the chautauquas started in the eastern United States.
Going back to George Daniel's approach to Institutionalization as a phase of Professionalization, it appears from the record that the jump from Preemption was an incomplete one. This may explain, in Daniel's terms, the transitional character of the Academy.

When George Coghill wrote to Stanford President David Starr Jordan in 1905, seeking advice about the goals of the Academy, Jordan replied:

> Permit me to congratulate you on the establishment of the Academy of Sciences in Oregon. There are very many problems which can be studied to advantage in Oregon, but the effectiveness of the work depends on the men and their training.168

In an attempt to institutionalize science in the state of Oregon, the Academy was unsuccessful. But the important issue here is that the attempt was made to organize scientists in Oregon—a conscious, well-planned endeavor prompted by professionals interested in bringing their work into the mainstream of American science. Also, its leaders seemed cognizant of the improved effectiveness of a broad institutional base of operation for more responsive support of science in the state.

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168 David Starr Jordan to George E. Coghill, 1 December 1905, Oregon State Academy of Sciences records, Oregon Historical Society Library, Portland.


"Albany Host to Savants of State." Portland Morning Oregonian, 29 April 1911, p. 7.


"Ellis Hughes: He Won Fame by Losing a Meteor." Portland Sunday Oregonian, 23 October 1938, p. 6.

Eugene, Oregon. University of Oregon Library, Special Collections-Manuscripts. Albert R. Sweetser MSS.

Eugene, Oregon. University of Oregon Library, Special Collections-Manuscripts. Martin W. Gorman MSS.


Forest Grove, Oregon. Pacific University Library-Archives. Faculty records.


"List of Members." Mazama 1 (1896):130-133.


"Man Dies in Room at Hotel." Portland Oregonian, 10 February 1926, p. 9.


"Mazama Presidents and Official Ascents." Mazama 4 (December 1913): 79.


"Meeting State Forestry Board." The Timberman 10 (January 1909):32M.


Old Forestry Building. Portland: Western Forestry Center, n.d.


"The Oregon Academy of Sciences." Pacific University (Forest Grove, Oregon) Weekly Index, 23 November 1909, p. 2.


"Oregon Forestry Association." The Timberman 10 (January 1909):32M.


"The Oregon State Academy of Sciences." Portland Sunday Oregonian, 5 March 1905, p. 34.


"Pacific Art Gallery." Pacific University (Forest Grove, Oregon) _Heart of Oak_, 1913, pp. 20-21.


Reed College Archives. William T. Foster MSS.


"President William Nelson Ferrin." Pacific University (Forest Grove, Ore.) _Heart of Oak_, 1913, p. 17.
"Prof. Beckwith honored by being elected first vice-president of Academy of Sciences." Oregon Agricultural College Barometer, 15 May 1912, p. 4.


Salem, Oregon. State Archives. Corporation Division Documents. (Accession No. 78RC-60 Item 1). Oregon Academy of Science (1910) and Oregon Academy of Sciences (1892).


Simon, Leo. Interview held during annual meeting of the Oregon Academy of Science, Willamette University, Salem, 26 February 1983.


Thaxter, B. A. "Scientists in Early Oregon." Oregon Historical Quarterly 34 (December 1933):330-44.


"W. N. Ferrin Elected President of Oregon Academy of Sciences." Pacific University (Forest Grove, Oregon) Weekly Index, 9 May 1911, p. 3.

"What 'Mazama' Stands For." Mazama 4 (December 1913): 79.


APPENDICES
Appendix A

Constitution of the Oregon State Academy of Sciences (1905)

Source: Oregon Historical Society Library, Portland

Note: Actual size of document (a stapled booklet)
OREGON STATE ACADEMY OF SCIENCES

OFFICERS
EDMUND P. SHELDON, Pres.
PORTLAND
ALBERT R. SWEETSER, 1st Vice-Pres.
EUGENE
ARTHUR S. CORDEY, 2nd Vice-Pres.
CORVALLIS
CHRISTINA MACCONNELL, 3rd Vice-Pres.
PORTLAND
JAMES A. LYMAN, Secy. & Treas.
PORTLAND
PORTLAND
L. L. HAWKINS, Librarian & Director
OF THE MUSEUM, PORTLAND

TRUSTEES
L. L. HAWKINS, PORTLAND
E. A. BEALS, PORTLAND
JAMES WITHERIDGE, CORVALLIS

EXECUTIVE COUNCIL
EDMUND P. SHELDON
JAMES A. LYMAN
M. W. GORMAN
G. E. COSHILL
CHRISTINA MACCONNELL
CONSTITUTION.

ARTICLE I.

NAME.

The name of this organization shall be the Oregon State Academy of Sciences.

ARTICLE II.

PURPOSE.

Section 1. The purpose of this Academy shall be to encourage scientific research and learning, to promote the diffusion of scientific knowledge among its members and throughout the State of Oregon, and to aid in the discovery and development of the natural resources of the state. It shall also place itself in communication with other like scientific institutions.

Section 1. In view of this purpose, and as prescribed by the By-Laws, the Academy shall hold meetings for the presentation of original papers on scientific subjects and for the discussion of questions which are of scientific interest, and shall publish reports of its proceedings. It shall also endeavor to collect and preserve objects which are of scientific interest, and shall administer its funds solely in the interests of the Academy and for the advancement of science.

ARTICLE III.

MEMBERS.

Section 1. The Academy shall consist of active, corresponding, honorary and life members and patrons.

Section 2. Residents of the State of Oregon who are interested in science shall be eligible to active membership in the Academy.

Section 3. Persons not living in the State of Oregon who further the objects of the Academy by the presentation of original papers for publication by the Academy, by contribution of specimens, or otherwise, may be elected corresponding members.

Section 4. Honorary members shall be persons who have attained distinction as investigators.
and who have personally contributed to the work
of the Academy.

Section 5. Any active member who shall con-
tribute at one time twenty-five dollars ($25.00)
to the general funds of the Academy shall be
elected a life member, and shall be exempt there-
after from annual dues.

Section 6. Any person conveying to the Acad-
emy the sum of five hundred dollars ($500.00) or
its equivalent may be elected a patron.

ARTICLE IV.
OFFICERS.

Section 1. The officers of this Academy shall
be president, first, second and third vice-presi-
dents, recording secretary, corresponding secre-
tary, treasurer, and librarian and director of the
museum.

Section 2. The officers shall be elected at the
annual meeting of the Academy, for a term of
one year, or until their successors are elected.

ARTICLE V.
TRUSTEES.

There shall be a board of trustees of the Acad-
emy, consisting of three active members. Of
these one shall be elected for one year, one for two
years and one for three years, or until successors
are elected. Thereafter the term of office shall
be uniformly three years, or until successors are
elected. This board of trustees shall act as cus-
todians of all the property of the Academy, and
shall administer all funds that may be received
by the Academy for general or prescribed pur-
poses.

ARTICLE VI.
EXECUTIVE COUNCIL.

Section 1. The president, the recording secre-
tary and the chairman of the publication, pro-
gramme and membership committees shall con-
stitute an executive council.

Section 2. It shall be the duty of this council
to audit all bills presented to the Academy. Such
as are found legitimate shall be indorsed by at
least three members of the council, after which
indorsement payment shall be ordered by a ma-
jority vote of the Academy. The council shall
also administer such other business as is pre-
scribed in the By-Laws or by a special vote of
the Academy.
ARTICLE VII.
STANDING COMMITTEES.

Section 1. There shall be a nominating committee of three, appointed by the president from among the active members who are not officers, whose duty it shall be to present to the Academy nominations of officers and trustees in accordance with the By-Laws which govern elections.

Section 2. There shall be a publication committee, whose duty it shall be to publish the proceedings of the Academy as the Academy may direct.

Section 3. There shall be a programme committee, whose duty it shall be to arrange a programme for each regular meeting.

Section 4. There shall be a membership committee, whose duty it shall be to solicit members.

ARTICLE VIII.
FEES AND DUES.

Section 1. All active members shall pay two dollars ($2.00) per annum in advance as annual dues.

Section 2. Any member who shall be in arrears for dues for one year shall have no vote in the Academy, and if such dues are not paid by the second annual meeting thereafter he shall be notified by the treasurer; and if he does not pay within three months after such notification his name shall be stricken from the rolls.

Section 3. The executive council shall be empowered to exempt (sub silentio) a member from dues when, from peculiar circumstances, they may deem it for the interests of the Academy to do so.

ARTICLE IX.
AMENDMENTS.

This Constitution may be amended at any regular meeting of the Academy by a three-fourths vote of the active members present. The amendment is to be read at three consecutive meetings and voted on at the third meeting.
BY-LAWS.

ARTICLE I.

ELECTIONS.

Section 1. All elections of officers and trustees shall be held at the regular annual meeting. Vacancies of officers and trustees may be filled by election at any regular meeting.

Section 2. For election of any person as active member of the Academy an application must be countersigned by two active members and filed with the recording secretary. The membership committee shall report to the Academy the names of all duly nominated candidates. The election shall be by ballot, and a three-fourths vote shall be necessary for election.

Section 3. For election of any person as honorary, corresponding, life member, or patron, a written nomination countersigned by four active members must be filed with the recording secretary, and the membership committee shall report to the Academy all nominations duly made. The vote shall be by ballot, and a three-fourths vote shall be necessary for election.

Section 4. Nominations of officers and trustees shall be made by the committee on nominations, and a majority vote shall elect.

ARTICLE II.

MEETINGS.

Section 1. The Academy shall hold an annual meeting on the third Saturday of February of each year.

Section 2. The regular meetings of this Academy shall be held on the third Saturday of each month.

Section 3. Special meetings may be arranged by the executive council, or by a vote of the Academy, of which meetings due notification shall be sent to all members by the corresponding secretary.
ARTICLE III.

ORDER OF BUSINESS.

Section 1. The following shall be the order of procedure at business meetings:
1. Reading of the minutes.
3. Reports of committees.
4. Elections.
5. Other business.

ARTICLE IV.

DUTIES OF OFFICERS.

Section 1. The president shall preside at all meetings of the Academy, and shall be chairman of the executive council. He shall appoint all committees as directed by the Academy, and shall be an ex officio member of all committees.

Section 2. The vice-presidents shall, in the absence of the president, perform all his duties, in the order of their succession.

Section 3. The recording secretary shall record the proceedings of the meetings of the Academy and of the executive council, and shall issue a membership ticket to all members of the Academy.

Section 4. The corresponding secretary shall report or publish such proceedings of the Academy as it shall direct, and shall conduct the official correspondence of the Academy. He shall prevail upon the correspondence and business of the Academy, which shall be at all times open to the inspection of members. He shall acknowledge the receipt of all donations to the museum or the library, and keep a list of all members, with their addresses, date of election, resignation or termination of membership in the Academy. He shall report to every meeting of the Academy, and shall give due notice of all meetings to every active member.

Section 5. The treasurer shall collect all dues from members and keep a full account of all receipts and disbursements, and shall pay out money only on the order of the Academy. He shall furnish, whenever required, a list of members entitled to vote. He shall not enter upon the duties of his office until he shall have given such bonds as the council may require.

Section 6. The librarian and director of the museum shall have charge of the library and the museum and scientific collections of the Academy.

Section 7. All officers of the Academy shall render written annual reports at the annual meeting.
ARTICLE V.

RULES OF ORDER.

Roberts' Rules of Order shall be considered authority in all the proceedings of the Academy.

ARTICLE VI.

QUORUM.

Five active members shall constitute a quorum in all meetings of the Academy.

ARTICLE VII.

AMENDMENTS.

These By-Laws may be altered or amended at any regular meeting of the Academy by a three-fourths vote of the members present, provided that due notice shall be given at the previous regular meeting.
## Appendix B

### Officers of the Oregon State Academy of Sciences

<table>
<thead>
<tr>
<th>Period of Service</th>
<th>Office</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1905-06</td>
<td>President</td>
<td>Edmund P. Sheldon</td>
</tr>
<tr>
<td></td>
<td>1st Vice President</td>
<td>Albert R. Sweetser</td>
</tr>
<tr>
<td></td>
<td>2nd Vice President</td>
<td>Arthur B. Cordley</td>
</tr>
<tr>
<td></td>
<td>3rd Vice President</td>
<td>Christina MacConnell</td>
</tr>
<tr>
<td></td>
<td>Recording Secretary</td>
<td>James A. Lyman</td>
</tr>
<tr>
<td></td>
<td>Corresponding Secretary</td>
<td>George E. Coghill</td>
</tr>
<tr>
<td></td>
<td>Treasurer</td>
<td>Martin W. Gorman</td>
</tr>
<tr>
<td></td>
<td>Librarian and Director of the Museum</td>
<td>Lester L. Hawkins</td>
</tr>
<tr>
<td></td>
<td>Trustee (1-year term)</td>
<td>Lester L. Hawkins</td>
</tr>
<tr>
<td></td>
<td>Trustee (2-year term)</td>
<td>Edward A. Beals</td>
</tr>
<tr>
<td></td>
<td>Trustee (3-year term)</td>
<td>James R. Withycombe</td>
</tr>
<tr>
<td>1906-07</td>
<td>President</td>
<td>Edmund P. Sheldon</td>
</tr>
<tr>
<td></td>
<td>1st Vice President</td>
<td>Abraham L. Knisely</td>
</tr>
<tr>
<td></td>
<td>2nd Vice President</td>
<td>Cesar Lombardi</td>
</tr>
<tr>
<td></td>
<td>3rd Vice President</td>
<td>Edward A. Beals</td>
</tr>
<tr>
<td></td>
<td>Recording Secretary</td>
<td>Ernest Barton</td>
</tr>
<tr>
<td></td>
<td>Corresponding Secretary</td>
<td>George E. Coghill</td>
</tr>
<tr>
<td></td>
<td>Treasurer</td>
<td>Martin W. Gorman</td>
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<tr>
<td></td>
<td>Librarian and Curator</td>
<td>Lester L. Hawkins</td>
</tr>
<tr>
<td></td>
<td>Trustee</td>
<td>Edward A. Beals</td>
</tr>
<tr>
<td></td>
<td>Trustee</td>
<td>James R. Withycombe</td>
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<tr>
<td></td>
<td>Trustee</td>
<td>Prince L. Campbell</td>
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<tr>
<td>1907-08</td>
<td>President</td>
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<td>1st Vice President</td>
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<tr>
<td></td>
<td>2nd Vice President</td>
<td>Albert R. Sweetser</td>
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<tr>
<td></td>
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<td>Arthur B. Cordley</td>
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<tr>
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<td>Treasurer</td>
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<td></td>
<td>Librarian and Curator</td>
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<tr>
<td></td>
<td>Trustee</td>
<td>John C. Bridwell</td>
</tr>
<tr>
<td>Year</td>
<td>President</td>
<td>1st Vice President</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>1911-12</td>
<td>William N. Ferrin</td>
<td>William T. Foster</td>
</tr>
</tbody>
</table>

*According to the Oregonian 30 April 1911, p. 6: "... A. W. Miller, of Portland, was ... re-elected to succeed himself on the board of trustees to serve for three years. The holdover members of this board are E. A. Beals and Ira. E. Purdin, both of Portland." However, the Academy meeting programs list Knisely.
<table>
<thead>
<tr>
<th>Year</th>
<th>President</th>
<th>1st Vice President</th>
<th>2nd Vice President</th>
<th>3rd Vice President</th>
<th>Secretary</th>
<th>Treasurer</th>
<th>Curator and Librarian</th>
<th>Trustee</th>
<th>Trustee</th>
<th>Trustee</th>
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<tbody>
<tr>
<td>1913-14*</td>
<td>Harold N. Lawrie</td>
<td>Albert R. Sweetser</td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
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</table>

*Information incomplete for that period.*
Appendix C

Committees of the Oregon State Academy of Sciences

1909-10

PROGRAM:   J. D. Lee, William N. Ferrin, A. W. Miller, Mary F. Farnham
MEMBERSHIP: F. W. Power, Arthur B. Cordley, Morton E. Peck
PUBLICATION: A. W. Miller, Edward R. Lake
NOMINATING: Mary F. Farnham, Albert R. Sweetser, Charles E. Bradley
RESOLUTIONS: John F. Bovard, Charles O. Chambers, A. W. Miller

1910-11

PROGRAM:   Abraham L. Knisely, William N. Ferrin, A. W. Miller, Herbert S. Jackson
MEMBERSHIP: F. W. Power, John F. Bovard, Charles E. Bradley, H. N. Lawrie
PUBLICATION: A. W. Miller, F. W. Power, Dav Raffety
NOMINATING: Mary F. Farnham, Albert R. Sweetser, Charles E. Bradley
RESOLUTIONS: A. W. Miller, Jane Stearns, Morton E. Peck

1911-12

PROGRAM:   Edmund P. Sheldon, Abraham L. Knisely, Jane Stearns
MEMBERSHIP: J. D. Lee, W. F. Fargo, William P. Boynton, David Torbet, F. W. Power

1912-13

PUBLICATION: John Gill, William F. Woodward, Frank L. Griffin
NOMINATING: Prince L. Campbell, J. D. Lee, William Kletzer, Herbert S. Jackson, H. N. Lawrie
RESOLUTIONS: E. A. Beals, Dav Raffety, Jane Stearns
ACADEMY PROPERTY: William L. Finley, George H. Himes, Edmund P. Sheldon
Appendix D

Persons Involved with the Oregon State Academy of Sciences

ACTIVE PARTICIPANTS*

Baker, Franklin L.  
Barton, Ernest  
Beals, Edward A.  
Bean, Arthur M.  
Beckwith, Theodore D.  
Bell, John R. N.  
Bohman, A. T.  
Bovard, John F.  
Boynton, William P.  
Bradley, Charles E.  
Bridwell, John C.  
Callaway, Edward C.  
Campbell, Prince L.  
Cate, C. C.  
Chambers, Charles O.  
Coghill, George E.  
Cooper, J. Calvin  
Cordley, Arthur B.  
Crawford, James G.  
Crooks, Harry M.  
Cusick, William C.  
Evans, Sarah A.  
Fargo, W. F.  
Farnham, Mary F.  
Ferrin, William N.  
Finley, William L.  
Flinn, Michael A.  
Foster, William T.  
Franklin, Frank G.  
French, Mrs. S. C.  
Fulton, John F.  
Gilbert, J. Allen  
Gill, John  
Gorman, Martin W.  
Green, William V.  
Griffin, Frank L.  
Hawkins, Lester L.  
Herring, W. E.  
Hill, Anne L.  
Hill, J. Linsey  
Himes, George H.  
Homan, Fletcher  
Horner, John B.  
House, William  
Hudson, John  
Jackson, Herbert S.  
Kletzer, William  
Knisely, Abraham L.  
Kraus, Ezra J.  
Lake, Edward R.  
Lane, Harry E.  
Lawrie, Harold N.  
Lee, Joseph D.  
Leonard, Heman B.  
Lewis, John H.  
Lombardi, Cesar  
Lyman, James A.  
MacConnell, Christina  
Miller, Anthony W.  
Mulkey, Frederick W.  
Parks, Henry M.  
Peck, Morton E.  
Power, Frank W.  
Purdin, Ira E.  
Raffety, Dav  
Robinson, L. A.  
Sheldon, Edmund P.  
Shippee, Lester B.  
Smith, Andrew C.  
Stafford, Orin F.  
Stearns, Jane  
Stover, A. P.  
Sweetser, Albert R.  
Tartar, Herman V.  
Terrill, Arthur C.  
Thorne, Norman C.  
Torbet, David  
Torrey, Harry B.  
Walker, D.  
Weniger, William  
Wheelwright, William D.  
White, O. V.  
Withycombe, James R.  
Wolf, L. J.  
Woodward, William F.  
Yoder, Arthur E.

*Persons serving as leaders and/or presenting scientific information at meetings.
NAMES ONLY MENTIONED IN ARTICLES OR CORRESPONDENCE—
NOT LEADERS OR PROGRAM PARTICIPANTS

Cardwell, James R.
Cardwell, Mrs. J. R.
Drake, J. Francis
Ellis, Matthew H.
Idleman, Cicero M.
Kelley, Eugene
MacLaren, John D.
Munger, Thornton T.
Nicholas, Ross
Rockey, Alpha E.
Schmidt, "Mr."

NON-RESIDENT GUEST SPEAKERS AT MONTHLY MEETINGS

Lamson-Scribner, Frank
Lyon, Marcus W., Jr.
Sampson, Alden
Walker, Elda R.

PERSONS PRESENTING WELCOMING ADDRESSES AT ANNUAL MEETINGS

Kerr, William J.
Simon, Joseph
Wallace, J. P.

COMPREHENSIVE BIOGRAPHICAL LISTINGS

Note: The following abbreviations are used:

AMS  American Men of Science (J. M. Cattell, ed.)
OAC  Oregon Agricultural College
OAS (1892)  Oregon Academy of Sciences founded in 1892
OAS (1943)  Oregon Academy of Science founded in 1943
OSC  Oregon State College
BARKER, Franklin Luther (1871-1920)
Mining and Geology Prof., Univ. of Oregon 1908-? (AMS).

BARTON, Ernest (1856-1926)
Physician in Portland (City Directory); died Portland 9 Feb. OSAS: Record Secretary 1906-07, 1907-08; 2nd Vice President 1909-10.

BEALS, Edward Alden (1855-1931)
Director, U.S. Weather Bureau, Portland District 1900-17. Born Troy, NY 25 Apr; studied dental surgery at Harvard Univ. (practiced 5 years); started working for U.S. Meterological Service in 1880; left Portland in 1917 to direct new district office in San Francisco when the Portland (OR, WA, ID) and San Francisco (CA, NV) districts were merged; credited with originating the system of fire-weather forecasts and the local fruit frost-warning service. OSAS: Trustee 1905-07, 1910-13; 3rd Vice President 1906-07; Paper (1906) "General Motions of the Atmosphere"; Paper (1910) "Weather Forecasting."

BEAN, Arthur Malcom (?-?)

BECKWITH, Theodore Day (1879-1946)
Head of Microbiology Dept., OAC; Prof. Microbiology, OAC 1912-19 (AMS). Born Utica, NY 8 Dec; B.S. (1904), M.S. (1907) Hamilton College, Clinton, NY; Fellow of AAAS (1914); Algologist USDA 1904-05; Scientific Asst. Plant Physiology USDA 1905-07; Asst. Prof. Bacteriology and Plant Path., North Dakota Agr. College 1907-12 (and Asst. Botanist, Exp. Sta.). OSAS: 2nd Vice President, 1912-13; Paper (1912) "Some Recent Discoveries in Soil Bacteria"; Paper (1913) "Necessity for Pure Water."

BELL, John Richard Newton (1846-1928)
Presbyterian Minister, Corvallis. OSAS: Paper (1911) "The Philosophy of the Real and the Ideal."
BOHMAN, A. T. (?-?)
No information. OSAS: 1st Vice President 1908-9.
(Probably Herman T. Bohman (1872-1908); born Portland, OR
15 Apr; New York Trade School, Keller Art School; artist/
photographer specializing in bird and wild animal studies;
his photographic records of bird life on Three Arch Rocks and
Malheur Lake helped establish these settings as permanent bird
refuges; worked with William L. Finley; treasurer of Oregon
Audubon Society 25 years.

BOVARD, John Freeman (1881-?)
Prof. Zoology, Univ. of Oregon 1910-? (AMS). Born Los
Angeles, CA 18 Jan; B.S. (1903), M.S. (1906) Univ. of
California; Instr. Zoology, Univ. of Oregon 1903-08; Asst. Prof.
Biology 1908-10; Asst. in Histology and Embryology, Univ. of
California 1903; Research Ass., San Diego Marine Biology Lab
1903-05. OSAS: Resolutions Committee 1909-10; Membership
Committee 1910-11; 2nd Vice President 1910-11; Paper (1912)
"The Physiology of a Lake."

BOYNTON, William Pingry (1867-1955)
Prof. Physics, Univ. of Oregon 1906-? (AMS) Born
Weathersfield, VT 28 Oct; died 9 Mar; A.B. (1890), A.M. (1893)
Dartmouth, NH; Ph.D. (1897) Clark, MA; Prof., Southern
California 1890-93; Asst., Dartmouth 1893-94; Instr., Univ. of
California 1897-1901; Asst. Prof., Univ. of Oregon 1903-06.
OSAS: 3rd Vice President 1911-12; 1st Vice President 1912-13;
Membership Committee 1911-12.

BRADLEY, Charles Edward (1874-1960)
Head of Dept. Agr. Chemistry, Prof. Chemistry, Oregon
Born Galesburg, Ill. 22 Feb; M.S. (1899) Pacific Univ.
OSAS: Temporary Secretary 1905 organizational meeting;
Recording Secretary 1908-09; Nominating Committee 1909-10,
1910-11; Membership Committee 1910-11; Paper (1906) "Nehalem
Wax"; Paper (1909) "Role of Moisture and Carbon Dioxide in
Incubation"; Paper (1910) "The Soil in the Process of
Cultivation."

BRIDWELL, John Colburn (?-?)
Inst. Zoology, OAC 1907-10 (Entomologist) (OSU Archives).
OSAS: Trustee 1907-10 (3-yr term); Paper (1909) "Forest
Problems in Entomology."

CALLAWAY, Edward Cleveland (1885-1947)
City Milk Chemist, Portland 1911-18 (OSU Archives). Born
Canyon City, OR 10 Jan; died Corvallis, 27 May; B.S. (1909),
M.S. (1931) OAC and OSC; Prof. Chemistry, No. Pac. Dental Coll.,
Portland 1919-27; Dean of Pharmacy, Des Moines Univ. 1927-29;
the Milk Supply of the City."
CAMPBELL, Prince Lucien (1861-1925)

CARDWELL, James Robert (1830-1916)
Dentist in Portland. Born Springfield, IL 11 Sept; died Portland, OR; received classical education at Illinois Univ., Jacksonville; practiced dentistry at 19 and received degree at 21; moved to Oregon in 1852 and became Portland's first dentist; wrote for dentist journals and was chairman of Oregon board of dental examiners for many years; avocations included taxidermy, ornithology, geology, botany; he made early collections of birds and mammals in Willamette Valley, some of which went to the Smithsonian; he wrote on Oregon flora and fauna; had a prune ranch and nursery in Milwaukie and a fruit ranch in Corvallis; helped organize the State Horticultural Society, the Oregon Humane Society, North Pacific Dental College, the Portland Rose Show (1893), and the Portland Philharmonic Club (with which he was a flutist for 20 years). OSAS: Present at organizational meeting 4 Feb 1905; was listed as member of earlier OAS, 1892.

CARDWELL, Mrs. James R. (?-?)
Wife of Dr. James R. Cardwell of Portland. OSAS: Present at organization meeting 18 Feb 1905.

CATE, C. C. (?-?)
Asst. in Plant Pathology, OAC 1908 (Bonnell). OSAS: Paper (1908) "Apple Tree Anthracnose."

CHAMBERS, Charles Oscar (1866-?)
Prof. Biology, Pacific Univ. 1907-09; Research Fellow, Shaw Sch. Bot., Washington Univ., MO 1910-? (AMS). Born Van Wert, OH 7 Sept; A.B. (1891), A.M. (1895) Indiana Univ.; High School Science Teacher New Castle, IN 1895-1905; Prof. Biology, Georgetown College, KY 1905-07; Faculty Member Puget Sound Marine Station, WA, Summer 1908, 1909. OSAS: Treasurer 1908-09; 1st Vice President 1909-10; Resolutions Committee 1909-10.

COGHILL, George Ellett (1872-1941)
Prof. Biology, Pacific Univ. 1902-06; Prof. Biology, Willamette Univ. 1906-07; Prof. Zoology, Denison Univ., OH 1907-? (AMS). Born Beaucouf, IL 17 Mar; A.B. (1896) Brown Univ., RI; M.S. (1899) Univ. of New Mexico; Ph.D. (1902) Brown Univ., RI. OSAS: Constitutional Committee 1905 organizational meeting; Corresponding Secretary 1905-08; Executive Council
1905-08; Paper (1905) "The Taste Organs of Vertebrates"; Paper (1905) "Prelocalization in the Egg and Correlated Development."

COOPER, Jacob Calvin (1845-1937)
Born Lawrence County, MO 16 Jan.; arrived in Oregon 1866; McMinnville pioneer (res. 50 years); teacher, storekeeper, postmaster at Perrydale, later McMinnville; Civil War Veteran (Union); first Commander of Grand Army of the Republic (GAR) Custer Post; first Master of McMinnville Masonic Lodge; Master of the Grange; President of the Board of Trade; on Board of Directors of Lewis and Clark Exposition; President of state walnut association and directed walnut experiment station near McMinnville; author and publisher of books on Yamhill history and Indians. OSAS: Paper (1911) "Esperanto."

CORDLEY, Arthur Burton (1864-1936)
Prof. and Head Zoology and Entomology Dept., OAC 1895-1907(?); Dean of Agriculture, OAC 1907-31; Director of Agr. Exp. Station 1914-1920 (AMS). Born Pinckney, MI 11 Feb; died Corvallis 1 Nov; B.S. (1888), M.S. (1900), Sc.D. (1917) Michigan Agr. College. OSAS: 2nd Vice President 1905-06, 1908-9; 3rd Vice President 1907-08; Membership Committee 1909-10; Paper (1905) "Some Insect and Fungous [sic] Diseases of Fruits."

CRAWFORD, James G. (1850-?)
Photographer, Albany, OR (studio opened 1885). Born Hancock County, IL.; arrived Oregon in 1852; amateur archaeologist and local expert on Callapooia Mounds. OSAS: 1911 meeting program included visit to his mineral and archaeological collection.

CROOKS, Harry M. (1869-1962)
President, Albany College. OSAS: 2nd Vice President 1911-12.

CUSICK, William Conklin (1845-1922)
Farmer and amateur botanist in Union County. Born Adams County, IL 21 Feb; died Union, OR 7 Oct; arrived in Willamette Valley across Oregon Trail 1853; attended Willamette Univ. 1864; joined U.S. Army (discharged 1866); taught in Willamette Valley; moved to eastern Oregon 1872. OSAS: Paper (1911, cancelled) "Characteristics of Flora of Wallowa Mountains."

DRAKE, James Francis (1868-1937)
Dentist in Portland; amateur botanist. Born Petaluma, CA 21 Sept; LL.B. (1894) Univ. of Oregon; D.M.D. (1905) North Pacific Dental College; arrived Portland early 1880's; studied botany under Louis F. Henderson, Dr. Bolander, and Thomas Howell (his herbarium was given to Univ. of Oregon); classified and mounted an exhibit of 500 species of Oregon wildflowers for World's Columbian Exposition; interested in mineralogy and metallurgy; charter member of Mazamas 1894; charter member of
Science Club of Portland, 1892. OSAS: Temporary secretary at organizational meeting 4 Feb 1905.

ELLIS, Mathew H. (?-?)
Physician (and surgeon) in Albany. M.D. (1879) Univ. of Michigan; arrived Albany 1884; member of Independent Order of Foresters, Oregon State Medical Association. OSAS: listed in receiving line at reception of 1911 Annual Meeting, Albany.

EVANS, Sarah Ann (1854-1940)
President, Oregon Federation of Women's Clubs 1905-15; Portland Market Inspector (30 years). Born Bedford County, PA 4 June; died Portland, OR 8 Dec; graduated Lutherville College; arrived Portland 1893 with husband, Wilham M. Evans; active in woman suffrage, State Library creation, YWCA, and Lewis and Clark Expo activities. OSAS: Paper (1913) "Safeguarding the City Food Supply."

FARGO, W. F. (?-?)
No information; name appears as "Prof." in 1912 Annual Meeting Program. OSAS: Membership Committee 1911-12.

FARNHAM, Mary Francis (1847-1942)
Prof. English Language and Literature, Pacific Univ. 1897-?; Dean of Women. Born South Bridgton, ME 9 Jan; died Portland, OR 14 Nov; graduated from Mt. Holyoke, MA 1868; worked in New England and South Africa; Supt. of Schools, Bridgton, ME 1877-1880. OSAS: Nominating Committee 1909-11; Program Committee 1909-10; Paper (1908) "South African Flora"; Paper (1909) "A Visit to the Famous Herbarium of Linnaeus [sic] in London."

FERRIN, William Nelson (1854-?)

FINLEY, William Lovell (1876-1953)
Naturalist, author, photographer; State Game Warden 1911-15; State Biologist 1915-1919. Born Santa Clara, CA 9 Aug; died 29 June; arrived in Oregon 1887; graduate Univ. of California 1903; charter member of Northwestern Ornithological Assn. 1894; President of NOA 1896; Charter Member of John Burroughs Society 1898; State President, Oregon Audubon Society 1906-1926; became member of Pacific Northwest Bird and Mammal Society 1924. OSAS: Committee on Academy Property 1912-13; Paper (1908) "Birds of Three Arch Rocks Region"; Paper (1911) "The State

FLINN, Michael A. (1841-?)
Portland Physican (listed as "Dr. M. A. Flinn"). Born Westchester County, NY; M.D. (1872) Willamette Univ.; Chairman of Physiology, Univ. of Oregon Medical Dept., Portland 1887. OSAS: Paper (1905) "Curing and Mounting Wild Flowers."

FOSTER, William Trufant (1879-1950)

FRANKLIN, Frank George (1861-1944)

FRENCH, Mrs. S. C. (?-?)

FULTON, John Franklin (1868-1953)
Prof. Chemistry, OAC. Born Edinburgh, Scotland 15 Dec; died Corvallis, OR 1 Feb. OSAS: Paper (1913) "Flour."

GILBERT, J. Allen (1867-?)
Physician, surgeon in Portland. Born Dayton, OH 5 Apr; arrived Oregon 1901; A.B. (1889) Otterbein Univ.; Ph.D. (1894) Yale; M.D. (1901) Univ. of Cincinnati; Prof. Physiology and Psychology, North Pacific College; Asst. Prof. Univ. of Oregon Medical College. OSAS: Paper (1909) "Dissociation of Personality."

GILL, John (1851-1929)

GORMAN, Martin Woodlock (1853-1926)
Amateur botanist, Portland; Curator of Forestry Building 1906-1926. Born Eganville, Ontario, Canada 23 Nov; died
Portland 7 Oct; attended McGill Univ. (Canada); founding member of Oregon Alpine Club (1887); Science Club of Portland (1892), Oregon Academy of Sciences (1892), Mazamas (1894); first climbed Mt. Hood in 1888; worked as clerk-bookkeeper in various businesses before getting the position as Curator. OSAS: Constitution Committee 1905 (temporary); Treasurer 1905-1908.

GREEN, William V. (1883-1948)
Chemistry teacher, Washington High School, Portland (40 years). Born Albany, NY 20 May; died Portland 22 Jan; graduated from Harvard Univ.; arrived in Portland from Iowa in 1907; Member of American Chemical Society and Masonic Lodge; Linus Pauling was among his students. OSAS: Paper (1910) "Radio-Activity, A Popular Phase."

GRiffin, Frank Loxley (1881-1969)
Prof. Math, Reed College 1911-?; Fellow of AAAS in 1914. Born Topeka, KS 19 Aug; B.S. (1903), M.S. (1904), Ph.D. (1908) Chicago; Asst., John Crerar Library, Chicago 1902-06; Instr. Math, Williams 1906-09; Asst. Prof., Williams 1909-?; was a member and officer of OAS (1943); was Secretary of the Northwest Scientific Assn. and 1st Vice-Pres. of Mathematical Assn. of America; became President of Reed College in 1954. OSAS: Publications Committee 1912-13; Paper (1913) "The Ever-present Limit Concept."

HAWKINS, Lester Leander (1848-1906)
Banker and businessman, Portland. Born Cleveland, OH 17 Mar; died Portland, OR 11 Mar; earned degree in civil engineering and geology (?) from Oakland College (later Univ. of California) in 1873 and taught math and civil engineering there for four years while also doing survey work; in summer 1870 made field trip with Prof. Joseph Le Conte, scientist; in 1871 moved to Oregon; headed J. C. Ainsworth interests in Portland and on the upper Columbia; first Pres. of Ainsworth National Bank at Portland and Ainsworth, OR; helped organize U.S. Electric Light & Power Co. (later Portland General Electric Co.); founder of Portland Park System; founder of City Free Museum (1898); Charter member of Mazamas (1894); member of Oregon Academy of Sciences (1892) and of national and philanthropic groups; directed Portland Mechanics Exposition in the 1890s. OSAS: Librarian and Director of the Museum 1905-6, 1906-07 (died in office); Trustee 1905.

HERRING, William E. (?-?)
HILL, Anne Laura (?-?)
Asst. in Zoology and Entomology classes, OAC (graduate student ?). OSAS: Paper (1908) "Notes on Trichoptera."

HILL, John Linsey (1845-1919)
Physician and surgeon specializing in mental and nervous diseases, Albany, OR. Born McNairy County, TN 28 Feb; died in Albany, OR; graduated from Willamette Univ. (M.D.) 1871; post-graduate at New York School of Clinical Medicine 1900; occupied chair of genitourinary diseases in the medical department of Willamette Univ. 1895-?; contributed one of the first original papers published in Oregon Medical and Surgical Report (1871); charter member of Oregon State Medical Society (1874); amateur naturalist and local expert on Callapooia Mounds; owned large private collection of cultural and natural history objects (his collection, donated by his children, became foundation for the College Museum at OAC in 1924). OSAS: Paper (1911) "Brain and Individuality."

HIMES, George Henry (1844-1940)
Printer, historian, founder and long-time curator of Oregon Historical Society Museum. Born Troy, PA 18 May; died Portland, OR 6 Jan; came to Oregon in 1853; attended rural school near Olympia, WA 1854-59; started diary in 1858 which he continued throughout his life; learned printing and worked on Washington Standard (Olympia) 1861-64; moved to Portland (1866) and worked on The Oregonian, then for printer William D. Carter, with whom he later formed a partnership; printed first book of poetry of Joaquin Miller; in 1870 bought out Carter and became a publisher; issued the Commercial Reporter from 1871-81; helped found the Oregon Historical Society in 1898, serving as Curator from 1899 to 1938; secretary of the Oregon Pioneer Assn. for 53 years (1887-1940); assisted with Lewis and Clark Exposition in 1905 and wrote the history of Oregon for fair's guidebook; active in Oregon Humane Society, YMCA, and Indian War Veterans of Pacific States; avid collector and preservationist of historical documents, newspapers and relics. OSAS: Committee on Academy Property 1912-13.

HOMAN, Fletcher (1868-1949)

HORNER, John Baptiste (1856-1933)
Prof. History and Literature, OAC 1891-1932; Director of Oregon Historical Research. Born Brazos River, TX 4 Aug., died Corvallis, OR 14 Sept.; M.S. Philomath College (1881), B.A. and M.A. from Willamette Univ. (1885, 1887) (Dict. Oregon History)
(OSU Archives show conflicting dates and more degrees: B.S. (1877), M.S. (1879), B.A. (1884), A.M. (1886), Litt.D. (1899); L.H.D. (1929); father, Rev. Elias Horner, moved to Walla Walla in 1862; principal of several Oregon high schools; edited Teachers' Journal; member of Oregon Board of Examiners before becoming professor at OAC in 1891; author of several books about Oregon; member of Oregon Geographic (Names) Board 1911-?; OSAS: Paper (1910) "The Oregon Geographic Board"; Paper (1911) "The Oregon Geographic Board."

HOUSE, William (?-?)
Physician, Portland (1910 Portland City Directory). OSAS: 1913 OSAS meeting minutes (3 Jan) from Jane Stearns refer to "Dr. House."; Paper (1913) "The Structure of the Connections of the Brain and the Outside World."

HUDSON, John (?-?)

IDLEMAN, Cicero Milton (1854-?)
Lawyer in Portland. OSAS: attended organizational meeting 18 Feb. 1905; member of OAS (1892).

JACKSON, Herbert Spencer (1883-1951)

KELLEY, Eugene (?-?)
Physician (?) OSAS: Mentioned as "M.D." in letter to John F. Bovard from William T. Foster, 24 April 1913, in reference to nominating committee.

KERR, William Jasper (1863-1947)
President, OSC 1907-1932. Born Richmond, UT 17 Nov; died Portland, OR 15 Apr; graduated from Univ. of Utah in 1885 and did graduate work at Cornell Univ. (prepared for law); delegate to Utah constitutional conventions 1887, 1895; at 21 managed mercantile firm; taught in Smith, UT schools and became city school superintendent; taught at Brigham Young Univ. 1887-92 and at Univ. of Utah 1892-94; in 1894, at 30, became president of Brigham Young Univ.; in 1900, became president of Utah State Agri. College; in 1907 accepted presidency of OAC (later OSC); first chancellor
of the State System of Higher Education (1932-35); listed as member of OSAS in Who's Who in America 1912-1913. OSAS: Welcoming address at 1912 Annual Meeting.

KLETZER, William (1883-1969)
Head, Physics Dept., Portland Academy. Born Grand Rapids, MI 22 July; died Portland, OR 13 Mar; earned engineering degree from Univ. of Michigan (1905); came to northwest in 1907 to install headgates of Sunnyside irrigation canal, Zillah, WA; established substations of the Oregon Electric Railroad between Portland and Salem; worked for Scandinavian-American Bank in Alaska; principal of Newberg High School. OSAS: Nominating Committee 1912-13.

KNISELY, Abraham Lincoln (1865-1943)
Prof. Chemistry, OAC 1900-?; Acting Chief, U.S. Food Lab, Portland 1909-? Born Chicago, IL 19 Feb; died Seattle, WA 12 Feb; B.S. (1891), M.S. (?) Univ. of Michigan; did post-graduate work in agricultural chemistry and horticulture at Cornell Univ.; Chief Chemist at state Agr. Exp. Station. OSAS: 1st Vice President 1906-07; President 1909-10; Treasurer 1911-12, 1912-13; Trustee 1910-13 (3-yr term); Program Committee 1911-12; Paper (1909) "Work of the U.S. Food Lab"; Paper (1913) "The Federal Food and Drug Inspection Act."

KRAUS, Ezra Jacob (1885-1960)

LAKE, Edward Ralph (1860-1947)

LAMSON-SCRIBNER, Frank (1851-1938)
LANE, Harry E. (1855-1917)
Physician; Mayor of Portland 1905-09. Born Corvallis, OR 28 Aug; died Washington, D.C. 23 May; graduated (1876) and received M.D. (1878) from Willamette Univ.; post-graduate work at College of Physicians and Surgeons, New York City; practiced in San Francisco, then moved to Portland; superintendent of Oregon State Asylum 1887-1891. OSAS: Paper (1905) "The Indians and Their Care of the Forests."

LAWRIE, Harold Newbold (1883-?)
Manager/Mining Engineer, Portland Analytical Lab. Born New York, NY 9 Mar; graduated (1901) from Montclair Military Academy, NJ; E.M. (1905) School of Mines, Columbia Univ.; M.A. (1920) Univ. of Oregon; Consulting Geologist/Chemist, Western States and British Columbia 1905-17; Portland, Ore. 1917-?; actively supported creation of Oregon Bureau of Mines and Geology; involved in national legislation concerning natural resources in U.S. and Alaska; economist, American Mining Congress 1919-21; Managing Director, American Gold and Silver Institute 1922-?; Asst., U.S. Senate commission on gold, silver inquiry 1922-25; Washington representative; member of Portland Chamber of Commerce 1922-27; economic adviser to U.S. shipping board merchant fleet corporation; member of various political and professional organizations. OSAS: Membership Committee 1910-11; Nominating Committee 1912-13; President 1913-14; Paper (1909) "Mineral Occurrences of the State of Oregon with Reference to Future Development."

LEE, Joseph Daniel (1848-1931)
Businessman and State Senator. Born near Monmouth, OR 27 Jul; graduated (1867) from National Business College, Portland; Dallas, OR postmaster 1870-73; bought out father's business in 1876; promoted "West Side" narrow gauge railroad; Polk County legislator in 1878; state senator 1880-87; farmed for awhile near Dallas and Portland; in early 1890's became part owner of the Oswego townsite; during depression years filed bankruptcy and became active in Portland; Superintendent of the state penitentiary 1899. OSAS: 3rd Vice President 1909-10; Chairman, Program Committee 1909-1910; President 1910-11; Membership Committee 1911-12; Nominating Committee 1912-13; Paper (1908) "The Tides"; Paper (1909) "A People's Cabinet."

LEONARD, Heman Burr (1872-?)
Prof. Math, Univ. of Oregon 1906-14(?). Born Detroit, MI 22 Aug; B.S. (1895) Michigan; Ph.D. (1906) Colorado; Prof. Math, Wesleyan, IL 1901-03. OSAS: Paper (1908) "Space and Number Systems."

LEWIS, John H. (?-?)
State Engineer, Salem (first to fill this position). OSAS: Paper (1910) "Irrigation and Conservation."
LOMBARDI, Cesar Maurice (1845-1919)
Publisher and businessman, Portland 1899-1906. Born Airolo, Switzerland 6 Aug; died Houston, TX 23 June; came to America in 1860; attended high school in Switzerland and Jesuit College in New Orleans; accountant and manager, Houston (1871-86), member of firm (1886-98?) William D. Cleveland and Co., wholesale grocers and cotton factors; trustee of William M. Rice Institute (Rice Univ.), Houston; President, Houston School Board 1886-98; in wholesale wheat business at Portland, OR 1899-1906; President of W. A. Gordon Co. 1902-06; returned to Texas in 1906. OSAS: 2nd Vice President 1906-07 (left Oregon before term expired).

LYMAN, James Alexander (1866-1926 or 1927)

LYON, Marcus Ward, Jr. (1875-?)

MacConnell, Christina (1831-1922)
Teacher, Chemistry and Physiology, Washington High School in Portland 1879-1921. Born Edinburgh, Scotland; died Portland, OR 20 Dec; arrived in America in 1833; attended seminary in Newport, KY; M.D. (1862) Univ. of Cincinnati, OH; taught at Cincinnati High School for 17 years; came to Portland in 1879 where she taught high school for 42 years. OSAS: 3rd Vice President 1905-06; had been member of earlier OAS (1892).

MacLAREN, John Dice (?-?)
Physician in Portland; associated with Univ. of Oregon medical school; on list of Pacific Division AAAS members (1914). OSAS: Referred to in minutes 3 Jan 1913 by Jane Stearns as "Dr. McLaren."

MILLER, Anthony W. (1842-1923)
Born Massillon, OH; died Portland, OR 14 Jan; served in Union Army during Civil War; came to Portland "several years after the war"; assumed command of George Wright Post, GAR in 1886; Asst. Supt. Oregon Minerals Exhibit, World's Columbian Exposition 1893; Supt., Bureau of Information and Permanent Exhibit of Oregon's Resources of Portland Chamber of Commerce-Commercial Club Building (1910); referred to as "Dr." or "Col."; interested in public museum for Portland as early as 1895. OSAS: Librarian and Curator of Museum 1906-1914 (replaced L. L. HawkIns when he
died); Program Committee 1909-11; Publication Committee 1909-11; Resolutions Committee 1910-11; Paper (1910) "The Oregon Academy of Sciences, Its Scope and Objects"; Paper (1912) "History of the Willamette Meteorite and Other Meteorites."

MULKEY, Frederick William (1874-1924)
Attorney; U.S. Senator. Born Portland, OR 6 Jan; died May 4; LL.B. (1896) Univ. of Oregon; graduated (1899) New York Law School; admitted to Oregon Bar in 1898 and practiced in Portland; elected in 1906 to fill unexpired term of Senator J. H. Mitchell (Jan. 23-Mar 3, 1907); elected in 1919 to fill Senator Harry Lane's unexpired term but resigned to permit appointment of Charles L. McNary. OSAS: Paper (1910) "State and National Conservation."

MUNGER, Thornton Taft (1883-1975)
Asst. Chief of Forest Management in Oregon and Director of the Pacific Northwest Forest Experiment Station 1908-46. OSAS: Referred to in minutes 3 Jan 1913 by Jane Stearns (Edmund Sheldon read a letter from Munger stating his interest in joining the Academy); member of OAS (1943).

NICHOLAS, Ross (?-?)
Amateur ornithologist in Portland. OSAS: on Constitutional Committee at 4 Feb 1905 meeting.

PARKS, Henry Martin (1872-1945)
Prof. Mining Engineering, OAC 1908-? Died Lake County, OR 28 Feb; appointed Director of State Bureau of Mines at OAC 1911; appointed Dean of the School of Mines 1914. OSAS: Paper (1908) "Surface Tension Applied to Ore Dressing."

PECK, Morton Eaton (1871-1959)

POWER, Frank W. (?-?)
Businessman, Portland (with Charles E. Power, Power Real Estate; listed in 1910, 1911 Portland City directories); secretary of Oregon State Horticultural Society (1910). OSAS: Secretary-Treasurer 1909-10; Secretary 1910-1912 (resigned); Membership Committee 1909-1912; Publication Committee 1910-11.
PURDIN, Ira E. (1845-?)
Farmer (near Forest Grove); amateur geologist. Born Boone County, MO 7 Nov; attended Tualatin Academy and Pacific Univ.; moved to Portland in 1906 after wife died and resided there 5 years. OSAS: became member in 1908 (?); Trustee 1910-13; Paper (1910) "Geology of the Willamette Valley."

RAFFETY, Dav (1844-?)
Physician in Portland. Born Missouri 15 Feb; graduated from Pacific Univ. in 1867; M.D. (1881) Willamette Univ.; served as Park Commissioner in Portland; Commissioner at Lewis and Clark Exposition 1905 (in charge of forestry building exhibits).

ROBINSON, L.A. (?)-?)
Unknown. OSAS: Paper (1908) "Theory of Electrons."

ROCKEY, Alpha Eugene (1857-1927)
Physician in Portland. Born Freeport, IL; practiced medicine in Iowa 1878-88; graduated with second (?) M.D. (1891) Rush Medical College; arrived in Portland 1891. OSAS: attended first organizational meeting 4 Feb 1905; was President of OAS (1892).

SAMPSON, Alden (?)-?)

SCHMIDT, "Mr." (?)-?)

SHELDON, Edmund P. (1869-1917?)
Actively involved in state forestry in various roles; lawyer. Born Bowling Green, MO 9 Aug; wife Eleanor G. Sheldon listed as widow in 1917 Portland City Directory; B.S. (1894) Univ. of Minnesota; Instr. Botany, Univ. of Minnesota 1894-97; USDA Special Agent for Botany Exploration in Eastern Oregon 1897-?; Supt. Forestry for State of Oregon, Louisiana Purchase Exposition (1904) and Lewis and Clark Exposition (1905); Secretary, Oregon and Washington Lumber Manufacturer's Assn. (1907); General Manager of Oregon Lumber Agency (1909); Secretary, State Board of Forestry 1907-09; Curator, Portland City Free Museum 1906-09; lawyer in Portland (1912 city directory listed "Sheldon, Koonce [Ralph A.], and Carl [Ira W.], Lawyers"; 1913 city directory listed "Sheldon and Huntington [Carlos W.], Law Offices"); president of Mazamas 1912, 1913 (resigned?); also on Rainier Climb in 1905; Fellow of AAAS, at least by 1914 (Pacific Division member). OSAS: founding member; President 1905-08 (3 terms);
Program Committee, 1911-12; Secretary 1912-13; Committee on Academy Property 1912-13; Paper (1905) "Forestry in the United States"; Paper (1905) "The Forests of Oregon"; Paper (1906) "Past and Future Work of the Academy."

SHIPPEE, Lester Burrell (1879-1944)

SIMON, Joseph (1851-1935)
Lawyer; Portland mayor 1909-11. Born Germany 7 Feb; died 14 Feb; came America in 1852 and to Portland 1857; attended Portland public schools; studied law in the office of John H. Mitchell and Joseph N. Dolph and after admittance to bar in 1873 was taken into firm; practiced law throughout life; State Senator 1880-1892, 1894-1902; U.S. Senator, 1898-1903. OSAS: Welcoming address at 1910 Annual Meeting.

SMITH, Andrew C. (1856-?)
Physician in Portland. Born Richland County, WI; came to Oregon in 1863; graduated from Pacific Medical College in 1877; lived in California, New York, and Europe between 1880-1890; returned to Portland in 1890; appointed county physician in 1891; OSAS: Attended organizational meeting 4 Feb 1905; Paper (1913) "Pollution in Sources of Supply."

STAFFORD, Orin Fletcher (1873-1941)

STEARNS, Jane (or Janis) (ca. 1880-?)
Science teacher, Washington High School, Portland. Graduated from Chicago Univ. and attended the Univ. of California; taught at Washington High School until 1914; frequently went on trips with Mazamas and published article in Mazama (ca 1912); referred to as "Miss Stearns." OSAS: Resolution Committee 1910-11, 1912-13; Program Committee 1911-12; 3rd Vice President 1912-13; Paper (1910) "Science in the Secondary Schools and Its Application in Practical Life."

STOVER, Arthur P. (?-?)
In charge of USDA irrigation and drainage investigations; engineer (1910 Portland City Directory). OSAS: Paper (1910) "Irrigation in the Willamette Valley."
SWEETSER, Albert Raddin (1861-1940)

TARTAR, Herman Vance (1882-1967)

TERRILL, Arthur C. (?-?)

THORNE, Norman C. (1876-1950)
Prof. Chemistry, Portland Academy 1904-16; also taught physics and algebra. Born Central Valley, NY 12 July; died Portland, OR 15 Dec; graduated (1902) and received master's (1904) from Yale Univ.; went to Lincoln High School (was principal 1923-25); Asst. Supt. of Schools 1925-41. OSAS: Paper (1905) "The Precipitation of Barium Bromide by Hydrobromic Acid."

TORBET, David (1844-1916)
Prof. Mathematics, Albany College 1891-1916. Born Shreve, OH 12 July; 14 Apr; Civil War veteran (Ohio Vol. Infantry); received A.B. from Baldwin-Wallace College, Berea, OH, in 1886 or 1872; taught in Ohio and Virginia before coming to Oregon in 1886; principal of Wasco Independent Academy, The Dalles (1889) and of Santiam Academy, Lebanon (1890). OSAS: Membership Committee 1911-12; Paper (1911) "Can Consecutive Numbers Represent the Hypotenuses of Right Angled Triangles?"

TORREY, Harry Beal (1873-?)
Prof. Biology, Reed College 1912-20. Born Boston, MA 22 May; B.S. (1895), M.S. (1898) California; Ph.D. (1903) Columbia; asst. zoologist, Univ. of California 1895-98;
instr. 1898-1900, 1901-04; asst. prof. 1904-08; assoc. prof. 1908-12; Fellow of AAAS (Pacific Division) by 1914; prof. biology, Univ. of Oregon 1920-26. OSAS: Executive Council (position unknown) 1912-13; Paper (1913) "Eugenics, from the Biological Standpoint."

WALKER, D. (?-?)

WALKER, Elda Rema (1877-?)
Botanist; Fellow, University of Nebraska. Born Forest Grove, OR 2 Oct. OSAS: Paper (1905) "The Development of the Ovule and Pollen Tube in the Oregon Grape."

WALLACE, J. P. (?-?)
Physician ("Dr.") in Albany; Mayor of Albany. OSAS: gave address of welcome at 1911 Annual Meeting.

WENIGER, Willibald (1884-1959)

WHEELWRIGHT, William Dana (1849-1926)
Lumberman, civic leader. Born Valparaiso, Chile 16 Apr; died Portland, OR (?) 9 May; came to Portland in 1896. OSAS: Paper (1910) "Some Interesting Archaeological Occurrences."

WHITE, O. V. (?-?)
President and science instructor at Philomath College. OSAS: Paper (1910) "A Phase of the Divorce Problem: Viewed from the Standpoint of Social Economics."

WITHYCOMBE, James R. (1854-1919)
Director, State Agr. Exp. Station OAC. Born Devonshire, England 21 Mar; died Salem, OR 3 Mar; served as Governor 1915-1919 (elected 1914). OSAS: Trustee 1905-1910 (one 3-yr term, part (?) of 2nd term); Paper (1905) "Science and the Farm."

WOLF, L. J. (?-?)
Unknown physician (M.D.) in Portland; state veterinarian for 9 years (?). OSAS: Paper (1909) "The Peary Expedition of 1905-1906."
WOODWARD, William Finch (1863-1940)
Druggist in Portland. Born Rochester, MN 24 Aug; died Portland, OR 7 Oct; came to Oregon in 1881; worked his way up from chore boy in drugstore to night clerk (1884-89) and was partner in Woodard, Clarke, Drugs from 1889 until his death; state representative 1923-25; state senator 1931-33. OSAS: Publications Committee 1912-13.

YODER, Arthur E. (1878-1927)
Science teacher at Washington High School, Portland, OR 1908-10. Died 13 June; graduated from Pacific Univ. in 1902; taught in the Philippines 1902-04; also taught temporarily in Eastern Oregon. OSAS: Treasurer 1910-11.
### Known Meetings of the Oregon State Academy of Sciences

<table>
<thead>
<tr>
<th>Year</th>
<th>Month &amp; Day(s)</th>
<th>Type</th>
<th>Location</th>
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<tr>
<td>1905</td>
<td>February 4</td>
<td>Organizational</td>
<td>City Hall, Portland</td>
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<tr>
<td></td>
<td>February 18</td>
<td>Organizational</td>
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<tr>
<td></td>
<td>March 18</td>
<td>Monthly</td>
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<td></td>
<td>April 18</td>
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<td>May 20</td>
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<td>September 16</td>
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<td></td>
<td>October 21</td>
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<td>November 18</td>
<td>Monthly</td>
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<td>December 16</td>
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<tr>
<td>1906</td>
<td>January 20</td>
<td>Monthly</td>
<td>City Hall, Portland</td>
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<tr>
<td></td>
<td>February 17</td>
<td>Annual</td>
<td>City Hall, Portland</td>
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<tr>
<td>1907*</td>
<td>?</td>
<td>Annual</td>
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<tr>
<td>1908</td>
<td>January 17-18</td>
<td>Annual</td>
<td>Oregon Agricultural College, Corvallis</td>
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<tr>
<td>1909</td>
<td>?</td>
<td>Annual</td>
<td>Salem**</td>
</tr>
<tr>
<td></td>
<td>November 26-27</td>
<td>Semi-Annual</td>
<td>Pacific University, Forest Grove</td>
</tr>
<tr>
<td>1910</td>
<td>March 11-12</td>
<td>Annual</td>
<td>Commercial Club, Portland</td>
</tr>
<tr>
<td>1911</td>
<td>April 28-29</td>
<td>Annual</td>
<td>Albany College, Albany</td>
</tr>
<tr>
<td>1912</td>
<td>May 10-11</td>
<td>Annual</td>
<td>Oregon Agricultural College, Corvallis</td>
</tr>
<tr>
<td></td>
<td>November 30</td>
<td>Monthly</td>
<td>Public Library, Portland</td>
</tr>
</tbody>
</table>

*Article in Science March 6, 1908, p. 390, states that the 1908 meeting was the third annual for the Academy; therefore, I assume a second meeting occurred in 1907.

**In a 1910 letter from Frank Power to Henry D. Sheldon of the University of Oregon, he refers to the annual meeting "last year" in Salem. Semi-annual meeting in Forest Grove also lends weight to this suspicion.
<table>
<thead>
<tr>
<th>Year</th>
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<th>Location</th>
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<tr>
<td>1913</td>
<td>January 3</td>
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<td>Portland</td>
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<td>January 18</td>
<td>Monthly</td>
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<tr>
<td></td>
<td>February 15</td>
<td>Monthly</td>
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<td>May 9-10</td>
<td>Annual</td>
<td>Reed College, Portland</td>
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<tr>
<td>1914</td>
<td>April 25</td>
<td>Monthly</td>
<td>Public Library, Portland</td>
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</table>
Appendix F

Known Papers and Lectures Presented at Academy Meetings

<table>
<thead>
<tr>
<th>Year</th>
<th>Month &amp; Day(s)</th>
<th>Title (Speaker)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1905</td>
<td>February 4</td>
<td>The Bacteriology of Water (Sweetser)</td>
</tr>
<tr>
<td></td>
<td>March 18</td>
<td>The Taste Organs of Vertebrates (Coghill)</td>
</tr>
<tr>
<td></td>
<td>April 18</td>
<td>Forestry in the United States (Sheldon)</td>
</tr>
<tr>
<td></td>
<td>May 20</td>
<td>The Precipitation of Barium Bromide by Hydrobromic Acid (Thorne)</td>
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<tr>
<td></td>
<td>May 20</td>
<td>Curing and Mounting Wild Flowers (Flinn)</td>
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<tr>
<td></td>
<td>June 17</td>
<td>Agriculture in the Philippines (Lamson-Scribner)</td>
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<tr>
<td></td>
<td>August 19</td>
<td>Mammals of Oregon (Lyon)</td>
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<tr>
<td></td>
<td>August 19</td>
<td>The Development of the Ovule and Pollen Tube in the Oregon Grape (Walker)</td>
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<tr>
<td></td>
<td>September 16</td>
<td>The Forests of Oregon (Sheldon)</td>
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<tr>
<td></td>
<td>October 21</td>
<td>Science and the Farm (Withycombe)</td>
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<tr>
<td></td>
<td>October 21</td>
<td>Some Insect and Fungous [sic] Diseases of Fruits (Cordley)</td>
</tr>
<tr>
<td></td>
<td>November 18</td>
<td>The Indians and Their Care of the Forests (Lane)</td>
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<tr>
<td></td>
<td>November 18</td>
<td>Prelocalization in the Egg and Correlated Development (Coghill)</td>
</tr>
<tr>
<td></td>
<td>December 16</td>
<td>The Development of the Mushrooms and Other Fungi (Sweetser)</td>
</tr>
<tr>
<td>1906</td>
<td>January 20</td>
<td>General Motions of the Atmosphere (Beals)</td>
</tr>
<tr>
<td></td>
<td>January 20</td>
<td>Animals of Mt. Rainier National Park (Sampson)</td>
</tr>
<tr>
<td></td>
<td>February 17</td>
<td>The Past and Future Work of the Academy (Sheldon)</td>
</tr>
<tr>
<td></td>
<td>June (?)</td>
<td>Nehalem Wax (Bradley)</td>
</tr>
<tr>
<td>1908</td>
<td>January 17-18</td>
<td>South African Flora (Farnham)</td>
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<tr>
<td></td>
<td></td>
<td>Oysters in Oregon (Sweetser)</td>
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<tr>
<td></td>
<td></td>
<td>Future of Mining (Terrill)</td>
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<tr>
<td></td>
<td></td>
<td>Space and Number Systems (Leonard)</td>
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<tr>
<td></td>
<td></td>
<td>Theory of Electrons (Robinson)</td>
</tr>
</tbody>
</table>
1908 January 17-18  Surface Tension Applied to Ore Dressing (Parks)
The Birds of the Three Arch Rock [sic] Regions (Finley)
Apple Tree Anthracnose (Cate)
Notes on Trichoptera (Hill)
The Tides (Lee)

1909 November 26  Some Ecological Features of the Coast Flora in the Vicinity of Ocean Park, Oregon (Peck)
A Visit to the Famous Herbarium of Linneus [sic] in London (Farnham)
The Role of Moisture and Carbon Deoxide [sic] in Incubation (Bradley)
Vivi-section--Is It Justifiable? (Bean)
Work of the United Stated Food Laboratory (Knisely)
A People's Cabinet (Lee)
Geography of the Willamette Valley (Barker)
Arctic Exploration (Walker)
The Peary Expedition of 1905-06 (Wolf)

November 27  Halley's Comet (Ferrin)
The Influence of Scientific Investigation on Domestic Life (French)
Perfecting of Armor Plate and Projectiles (Hudson)
Mineral Occurrences of the State of Oregon with Reference to Future Development (Lawrie)
Dissociation of Personality (Gilbert)
Forest Problems in Entomology (Bridwell)
Forest Problems in Pathology (Jackson)

1910 March 11  Irrigation and Conservation (Lewis)
Irrigation in the Willamette Valley (Stover)
Radio-Activity, A Popular Phase (Green)
The Relation of Science to Civilization (Homan)
1910 March 11
Some Interesting Archaeological [sic] Occurances [sic] (Wheelwright)
A Phase of the Divorce Problem: Viewed from the Standpoint of Social Economics (White)
Geology of the Willamette Valley (Purdin)

March 12
The Change Taking Place in the Soil in the Process of Cultivation (Bradley)
Weather Forecasting (Beals)
The Orgon Geographic Board (Horner)
State and National Conservation (Mulkey)
Science in the Secondary Schools and Its Application in Practical Life (Stearns)
An Interesting Example of Hexadactylism and Its Bearing on Heredity (Sweetser)
Glimpses in the Bird-World ("Audubon Society")

1911 April 28
The Oregon Academy of Sciences, Its Scope and Objects (Miller)
Esperanto (Cooper)
Notes on Some of the Larger Fungi in Oregon (Peck)
Can Consecutive Numbers Represent the Hypothenuses [sic] of Right Angled Triangles (Torbet)
The Philosophy of the Real and the Ideal (Bell)
Plant Pathology (Jackson)
Pure Water (Sweetser)
The State and Its Relation to Game Protection (Finley)

April 29
The Oregon Geographic Board (Horner)
Brain and Individuality (Hill)
Characteristics of Flora of the Wallowa Mountains (Cusick; cancelled)
The Scientific Study of Education (Foster; cancelled)
The Sun and Radiant Heat (Ferrin)
1911 April 29  
Value, Waste, and Wealth (Franklin)  
Wireless Telegraphy (Boynton)  

1912 May 10  
Bacterial Flora of Oregon Waters (Sweetser)  
Chemical Treatment of Drinking Water (Stafford)  
History of the Willamette Meteorite and Other Meteorites (Miller)  
The Puget Sound Marine Station (Bean)  
Elements of the Electron Theory (Weniger)  

May 11  
Myxomycetes of the Willamette Valley (Peck)  
Legislatures Under the New System (Shippee)  
Some Recent Discoveries in Soil Bacteria (Beckwith)  
The Physiology of a Lake (Bovard)  
Bergson's "Creative Evolution" (Campbell)  
River Fishes of Oregon (Gill)  
Game Protection and Propagation in Oregon (Finley)  
Color in Apples Not Influenced by Pollination (Kraus)  

November 30  
The Scope of the Academy, and the Exact Sciences of Daily Life (Foster)  
The Ever-Present Limit Concept (Griffin)  

1913 January 3  
The Structure of the Connections of the Brain and the Outside World (House)  

January 18  
The Life of the Three Arch Rocks Reservation (Finley)  

February 15  
Eugenics, From the Biological Standpoint (Torrey)  

May 9  
Necessity for Pure Water (Beckwith)  
Pollution in Sources of Supply (Smith)  
Purification of Polluted Water (Stafford)
1913 May 10

Safeguarding the City Food Supply (Evans)

Drugs (Tartar)

Flour (Fulton)

The Federal Food and Drug Inspection Act (Knisely)

Safeguarding the Milk Supply of the City (Callaway)
Appendix G

Active Participants Affiliated with Educational Institutions

OREGON AGRICULTURAL COLLEGE, Corvallis (16)

Theodore D. Beckwith
Charles E. Bradley
John C. Bridwell
C. C. Cate
Arthur B. Cordley
John Fulton
Anne L. Hill
John B. Horner
Herbert S. Jackson
Abraham L. Knisely
Ezra J. Kraus
Edward R. Lake
Henry M. Parks
Herman V. Tartar
Willibald Weniger
James R. Withycombe

UNIVERSITY OF OREGON, Eugene (8)

Franklin L. Barker
John F. Bovard
William P. Boynton
Prince L. Campbell (president)
J. Allen Gilbert
Heman B. Leonard
Orin F. Stafford
Albert R. Sweetser

PACIFIC UNIVERSITY, Forest Grove (7)

Arthur M. Bean
Charles E. Bradley (to OAC in 1906)
Charles O. Chambers
George E. Coghll (to Willamette in 1906)
Mary F. Farnham
William N. Ferrin (president)
Lester B. Shippee

REED COLLEGE, Portland (3)

William T. Foster (president)
Frank L. Griffin
Harry B. Torrey
ALBANY COLLEGE, Albany (3)

Harry M. Crooks (president)
Frank G. Franklin
David Torbet

WILLAMETTE UNIVERSITY, Salem (3)

George E. Coghill
Fletcher Homan (president)
Morton E. Peck

PHILOMATH COLLEGE, Philomath (1)

O. V. White (president)

PORTLAND ACADEMY, Portland (3)

William Kletzer
James A. Lyman
Norman C. Thorne

WASHINGTON HIGH SCHOOL, Portland (4)

William V. Green
Christina MacConnell
Jane Stearns
Arthur E. Yoder
Appendix H

Articles of Incorporation of the Oregon Academy of Science (1910)

Source: Oregon State Archives, Salem.
Accession Number: 78RC-60 Item 1
File Number: 15072

Note: Copy reduction used; Certificate of Filing and Recording Articles of Incorporation is on legal size paper; other material on letter size.
File No. 15072.

STATE OF OREGON
OFFICE OF THE SECRETARY OF STATE

Certificate of Filing and Recording Articles of Incorporation

To All to Whom these Presents May Come, Greeting:

Know Ye, That whereas, J. D. Lee, Frank W. Power and A. W. Miller,

having presented Articles of Incorporation of a Corporation organized and formed for scientific purposes, under and pursuant to the Laws of the State of Oregon, and paid the organization fee provided by "An Act to provide for the licensing of Domestic Corporations and Foreign Corporations, Joint Stock Companies and Associations, etc." approved February 16, 1903;

Now, Therefore, I, F. W. Benson, Secretary of State of the State of Oregon,

do hereby certify, that said Articles of Incorporation have been filed and recorded in the office of the Secretary of State; that the name assumed by said corporation is

OREGON ACADEMY OF SCIENCE

the duration unlimited; the enterprise, business, pursuit or occupation is the promotion of scientific education by gathering together through periodical and migratory meetings, all those in our community who are interested in the acquirement and development of knowledge for the betterment of mankind through the observation of natural phenomena and by creating a means of intercourse between those devoted to nature study, in aiding and encouraging their efforts in the prosecution of original investigations along scientific lines, and by collecting, preserving and exhibiting in museums, natural history objects which are of scientific interest, so as to provide material that will assist in scientific investigation and public instruction through the diffusion of knowledge.

This corporation shall have the right to acquire property, real and personal, by purchase, gift, or exchange, and such property shall be held subject to the action of the majority of its actual members, through the board of trustees, the executive committee, or such parties as it may by vote direct to transact such business in accordance with the constitution.

And all such deeds, leases, contracts, conveyances and agreements, and all releases of mortgages, satisfaction of judgments and other obligations shall be signed by the president or vice-president and the secre-
tary and the signature of these officers shall be conclusive evidence that the execution of the instrument was authorized by the corporation.

The estimated value of its property and money is Nothing ($0.00) Dollars; the location of its principal office is Portland, in the County of Multnomah, State of Oregon; the date of filing its Articles of Incorporation, the 18th day of August A.D. 16620; and the amount of the organization fee paid Five and 00-100 ($5.00) Dollars.

In Testimony Whereof, I have hereunto set my hand and affixed hereeto the seal of the State of Oregon.

Done at the Capitol at Salem, Oregon, this 18th day of August, 16620.

[Signature]
Secretary of State
KNOW ALL MEN BY THESE PRESENTS:

That we, the undersigned, the officers of the Society known as the "Oregon Academy of Science", whose headquarters are in the City of Portland, in the County of Multnomah, State of Oregon, duly elected to said offices respectively according to the uses and regulations of said Society, do hereby associate ourselves for the purpose of incorporation and of being created and constituted a Corporation under and by virtue of the general incorporation laws of the State of Oregon relating to Societies, and do hereby make and subscribe and do hereby adopt the following Articles of Incorporation, to-wit:

ARTICLE I.

The name of this Corporation and by which it shall be known, is the "Oregon Academy of Science", and its duration shall be unlimited.

ARTICLE II.

The purpose for which this Corporation is constituted is the promotion of scientific education by gathering together through periodical and migratory meetings, all those in our community who are interested in the acquisition and development of knowledge for the betterment of mankind through the
observation of natural phenomena and by creating a means of intercourse between those devoted to nature study, in aiding and encouraging their efforts in the prosecution of original investigations along scientific lines, and by collecting, preserving and exhibiting in museums, natural history objects which are of scientific interest, so as to provide material that will assist in scientific investigation and public instruction through the diffusion of knowledge.

ARTICLE III.
The membership of the Corporation shall consist of the incorporators and such other persons as may be duly elected members of the Oregon Academy of Science.

ARTICLE IV.
The duly elected officers of the Academy shall be the officers of the Corporation.

ARTICLE V.
The headquarters of the Academy shall be in the City of Portland in the State of Oregon.
The capital of the Corporation is none.
The par value of its shares is none.
The number of shares is none.

ARTICLE VI.
This Corporation shall have the right to acquire pro-
party real and personal, by purchase, gift, or exchange, and such property shall be held subject to the action of the majority of its actual members through the Board of Trustees, the Executive Committee, or such parties as it may by vote direct to transact such business in accordance with the Constitution.

And all such deeds, leases, contracts, conveyances and agreements, and all releases of mortgages, satisfaction of judgments and other obligations shall be signed by the President or Vice-President and the Secretary and the signature of these officers shall be conclusive evidence that the execution of the instrument was authorized by the Corporation.

ARTICLE VII.

The private property of the members of this Corporation shall not be liable for any of its debts or obligations.

ARTICLE VIII.

By-Laws, Rules and Regulations not inconsistent with these articles may be enacted by the Academy.

ARTICLE IX.

The title of the officers making these Articles of Incorporation are as follows:

1. President
2. Vice-President
3. Secretary
4. Treasurer

(Blank space for additional titles if needed)
BE IT PROCLAIMED that on this 25th day of July, 1920, before me, the undersigned, a Notary Public, in and for the county and state, personally appeared the within named officers of the OREGON ACADEMY OF SCIENCE, to wit:

J. D. Lee
President

Frank W. Powers
Secretary and Treasurer

A. W. Miller
Curator and Librarian

To me known to be the individuals and officers described in and who executed the foregoing ARTICLES OF INCORPORATION as such officers of said OREGON ACADEMY OF SCIENCE, the above named society; and each acknowledged to me that he as such respective officer executed the same for the uses and purposes therein mentioned.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Notary Public for the State of Oregon.
ARTICLES OF INCORPORATION
of the
Oregon Academy of Science

Dissolved
December 31, 1945
By operation of Section 77-408d,
O.C.L.A., for failure to file
power of attorney.

Corporation Commissioner

Filed in the office of the Secretary of
State of the State of Oregon at 11:20
o'clock on the 11th day of
August, 1945.

Secretary of State
Appendix I

Meeting Programs

1. 1909, Semi-Annual Meeting of Pacific University, Forest Grove.  
Source: Oregon State University Archives, Corvallis.

Source: Reed College Archives, Portland.

3. 1911, Annual Meeting at Albany College, Albany.  
Source: Oregon Historical Society Library, Portland.

4. 1912, Annual Meeting at Oregon Agricultural College, Corvallis.  
Source: Oregon State University Archives, Corvallis.

5. 1913, Annual Meeting at Reed College, Portland.  
Source: Reed College Archives, Portland.

Note: All programs are actual size and have a folded, four-page format. The 1913 program was small enough to copy each side in its entirety without page separation or copy reduction.
Program

Semi-Annual Meeting
of the
Oregon State
Academy of Sciences

Held at
Forest Grove, November 26 and 27, 1909
Meetings in Marsh Hall of Pacific University

Brief Discussions will follow each address
Music will be furnished by local talent
The public is invited to attend all the sessions

EVERYONE INVITED TO JOIN
Forward Annual Dues, $2.00, to F. W. POWER, Secretary
224 Henry Building, Portland, Oregon
FRIDAY MORNING

10 o'clock

Address of Welcome—
   Dr. W. N. Ferrin, President Pacific University

Response—
   Professor A. L. Knisely, President of the Academy of Sciences.

Some Ecological Features of the Coast Flora in the Vicinity of Ocean Park, Oregon—
   Professor M. E. Peck, Willamette University

A Visit to the Famous Herbarium of Linneus in London—
   Miss Mary F. Farnham, Pacific University

FRIDAY AFTERNOON

2 o'clock

The Role of Moisture and Carbon Dioxide in Incubation—
   Professor C. E. Bradley, Oregon Agricultural College

Vivi-Section—Is it Justifiable?—
   Professor A. M. Dean, Pacific University

Work of the United States Food Laboratory—
   A. L. Knisely, Acting Chief

A People's Cabinet—
   J. D. Lee, Portland
FRIDAY EVENING
7:30 o'clock

Geography of the Willamette Valley—
Professor F. L. Barker, University of Oregon

Arctic Exploration—
D. Walker, M. D., Portland

The Peary Expedition of 1905-1906—
L. J. Wolf, M. D., Portland

SATURDAY MORNING
9 o'clock—Business Meeting

Halley's Comet—
President W. N. Ferrin

Visit to the Pacific Coast Milk Condensing Plant, Forest Grove.

SATURDAY AFTERNOON
2 o'clock

The Influence of Scientific Investigation on Domestic Life—
Mrs. S. C. French, Portland

Perfecting of Armor Plate and Projectiles—
John Hudson, Portland

Mineral Occurrences of the State of Oregon with Reference to Future Development—
H. N. Lawrie, M. E., Manager of the Portland Analytical Laboratory.
SATURDAY EVENING

7:30 o'clock

Dissociation of Personality—
J. ALLEN GILBERT, M. D., Portland

Forest Problems in Entomology—
PROFESSOR J. C. BRIDWELL, Oregon Agricultural College

Forest Problems in Pathology—
PROFESSOR H. S. JACOBSON, Oregon Agricultural College

OFFICERS

A. L. KNISLEY, President.
C. O. CHAMBERS, First Vice-President.
ERNEST BARTON, Second Vice-President.
J. D. LEE, Third Vice-President.
F. W. POWER, Secretary-Treasurer.
A. W. MILLER, Curator and Librarian.

COMMITTEES

PROGRAM
J. D. LEE  W. N. FERRIN  A. W. MILLER
MARY F. FARNHAM

MEMBERSHIP
F. W. POWER  A. B. CORDEY  M. E. PECK

PUBLICATION
A. W. MILLER  E. R. LAKE

NOMINATING
MARY F. FARNHAM  A. R. SWEETSER  C. E. BRADLEY

RESOLUTIONS
J. F. BOVARD  C. O. CHAMBERS  A. W. MILLER
Program Annual Meeting

of the

Oregon State
Academy of Sciences

Held at

Portland, Oregon,
March 11th and 12th, 1910
Convention Hall of the Commercial Club
Fifth and Oak Streets

Brief Discussion will follow each address.
The public is invited to attend all the sessions

Everyone invited to join
Forward Annual Dues, $2.00, to F. W. Power, Secretary
224 Henry Building, Portland, Oregon
FRIDAY MORNING
10 o'clock

Address of Welcome— Mayor Joseph Simon
Response— President W. N. Ferrin, Pacific University
Irrigation and Conservation— John H. Lewis, State Engineer
Irrigation in the Willamette Valley—
A. P. Stover, United States Department of Agriculture

FRIDAY AFTERNOON
2 o'clock

Radio-Activity, a Popular Phase—
W. V. Green, Portland Washington High School
The Relation of Science to Civilization—
President Fletcher Homan, Willamette University
Some Interesting Archaeological Occurrences—
William D. Wheelwright, Portland

FRIDAY EVENING
8 o'clock

A Phase of the Divorce Problem: Viewed from the Standpoint
of Social Economics—
President O. V. White, Philomath College
Geology of the Willamette Valley— Ira E. Purdin, Portland
SATURDAY MORNING
9 o'clock
Business meeting and election of officers
10 o'clock
The Changes Taking Place in the Soil in the Process of Cultivation—
Professor C. E. Bradley, Oregon Agricultural College
Weather Forecasting—
Edward A. Beals, Director Government Station

SATURDAY AFTERNOON
2 o'clock
The Oregon Geographic Board—
Professor John B. Horner, Oregon Agricultural College
State and National Conservation—
Frederick W. Mulkey
Science in the Secondary Schools and Its Application in Practical Life—
Miss Jane Stearns, Portland Washington High School

SATURDAY EVENING
8 o'clock
An Interesting Example of Hexadactylism and Its Bearing on Heredity—
Professor Albert R. Sweetser, University of Oregon
Glimpses in the Bird-World (Illustrated)—
By Audubon Society
OFFICERS
A. L. KNISELY ............ President
C. O. CHAMBERS........ First Vice-President
ERNEST BARTON........ Second Vice-President
J. D. LEE ............... Third Vice-President
F. W. POWER ............ Secretary-Treasurer
A. W. MILLER .......... Curator and Librarian

COMMITTEES

PROGRAM
J. D. Lee, W. N. Ferrin, A. W. Miller
Mary F. Farnham

MEMBERSHIP
F. W. Power, A. B. Cordley, M. E. Peck

PUBLICATION
A. W. Miller, E. R. Lake

NOMINATING
Mary F. Farnham, A. R. Sweetser, C. E. Bradley

RESOLUTIONS
J. F. Bovard, C. O. Chambers, A. W. Miller
Program Annual Meeting

OF THE

Oregon
Academy of Sciences

HELD AT

ALBANY, OREGON
April 28th and 29th, 1911
Assembly Hall of Albany College

The public is invited to attend all the sessions.
Brief discussion will follow each address.
Local talent will favor the meeting with music.

EVERYONE INVITED TO JOIN
Forward Annual Dues, $2.00, to F. W. Power,
306 Spalding Building, Portland, Oregon.
FRIDAY MORNING

10 O'clock

Address of Welcome—
Dr. J. P. Wallace, Mayor of Albany

Response—
J. D. Lee, President Oregon Academy of Sciences

The Oregon Academy of Sciences, Its Scope and
Objects—
A. W. Miller, Curator and Librarian

Esperanto—
J. C. Cooper, President Esperanto Association
of the Pacific Northwest

FRIDAY AFTERNOON

2 O'clock

Notes on Some of the Larger Fungi of Oregon—
Professor M. E. Peck, Willamette University

Can Consecutive Numbers Represent the Hypothenuses
of Right Angled Triangles?—
Professor David Torbet, Albany College Department of Mathematics

The Philosophy of the Real and the Ideal—
Doctor J. R. N. Bell, Corvallis

Plant Pathology—
Professor H. S. Jackson, Oregon Agricultural College

5 o'clock Automobile Ride Over City—
By invitation of Albany Commercial Club

FRIDAY EVENING

8 O'clock

Pure Water—
Professor Albert R. Sweetser, University of Oregon

The State and its Relation to Game Protection (Illustrated)—
William L. Finley, Lecturer National Association of Audubon Societies
SATURDAY MORNING

9 O'clock

Business Meeting and Annual Election of Officers

10 O'clock

The Oregon Geographic Board—
Professor J. B. Horner, Oregon Agricultural College

Brain and Individuality—
Doctor J. L. Hill, Albany

11:15 O'clock

Visit the Mineral and Archaeological Collection of
Mr. J. G. Crawford

SATURDAY AFTERNOON.

2 O'clock

Characteristics of Flora of the Wallowa Mountains—
William C. Cusick, Scientist, Eugene

The Scientific Study of Education—
Doctor William T. Foster, President Reed Institute

The Sun and Radiant Heat—
Doctor W. N. Ferren, President Pacific University

SATURDAY EVENING

8 O'clock

Value, Waste and Wealth—
Professor F. G. Franklin, Dean Albany College

Wireless Telegraphy (Illustrated)—
Professor W. E. Boynton, University of Oregon
OFFICERS

J. D. LEE .................................................. President
W. N. FERRIN .......................................... First Vice-President
JOHN F. BOVARD ........................................ Second Vice-President
H. S. JACKSON ........................................... Third Vice-President
F. W. POWER .............................................. Secretary
A. E. YODER .............................................. Treasurer
A. W. MILLER ............................................ Curator and Librarian

TRUSTEES—A. L. Knisely, E. A. Beals, Ira E. Purdin.
EXECUTIVE COUNCIL—J. D. Lee, F. W. Power, A. L. Knisely, A. E. Yoder.

COMMITTEES

Program
A. L. Knisely, W. N. Ferrin, A. W. Miller,
H. S. Jackson

Membership

Publication
A. W. Miller, F. W. Power, Dr. Dave Raffety.

Nominating
Mary F. Farnham, A. R. Sweetser, C. E. Bradley.

Resolutions
A. W. Miller, Jane Stearns, M. E. Peck
Program

Annual Meeting of the Oregon State Academy of Sciences held at Oregon Agricultural College
CORVALLIS, OREGON
MAY TENTH AND ELEVENTH
NINETEEN HUNDRED TWELVE
ROOM 329 HORTICULTURAL BUILDING

Brief discussion will follow each address. The public is invited to attend all sessions. Everyone interested in scientific work is invited to join.

Forward Annual Dues $2.00 to A.L. Knisely, Worcester Building, Portland, Oregon.
FRIDAY AFTERNOON.
Horticultural Building, Room 329.
2 o’Clock.

Address of Welcome
PRESIDENT W. J. KERR, Oregon Agricultural College, Corvallis.

Response
PRESIDENT W. N. FERRIN, Pacific University, Forest Grove.

Bacterial Flora of Oregon Waters
PROFESSOR A. R. SWEETSER, University of Oregon, Eugene.
Discussion.

Chemical Treatment of Drinking Water
PROFESSOR O. F. STAFFORD, University of Oregon, Eugene.
Discussion.

History of the Willamette Meteorite and Other Meteorites
COL. A. W. MILLER, Portland.
Discussion.

FRIDAY EVENING.
Mechanical Hall, Room 3.
8 o’Clock.

The Puget Sound Marine Station
PROFESSOR A. M. BEAN, Pacific University, Forest Grove.
Discussion.

Elements of the Electron Theory
PROFESSOR W. WENIGER, Oregon Agricultural College, Corvallis.
Discussion.
SATURDAY MORNING.
Horticultural Building, Room 329.
9 o'Clock.

Business Meeting and Annual Election of Officers
10 o'Clock.

Myxomycetes of the Willamette Valley
Professor M. E. Peck, Willamette University, Salem.
Discussion.

Legislatures Under the New System
Professor Lester B. Shippee, Pacific University, Forest Grove.
Discussion.

Some Recent Discoveries in Soil Bacteria
Professor T. D. Beckwith, Oregon Agricultural College, Corvallis.
Discussion.

SATURDAY AFTERNOON.
Horticultural Building, Room 329.
2 o'Clock.

The Physiology of a Lake
Professor J. F. Bovard, University of Oregon, Eugene.
Discussion.

Bergson's "Creative Evolution"
President P. L. Campbell, University of Oregon, Eugene.
Discussion.

River Fishes of Oregon
John Gill, Portland.
Discussion.
SATURDAY EVENING.
Horticultural Building, Room 329.
8 o'Clock.

Game Protection and Propagation in Oregon, with Illustrated Slides
W. L. Finley, State Game Warden, Portland.
Discussion.

Color in Apples Not Influenced by Polination
Professor E. J. Krause, Oregon Agricultural College, Corvallis.
Discussion.

OFFICERS.
W. N. Ferrin ............... President
W. T. Foster ............. First Vice-President
H. M. Crooks ............. Second Vice-President
W. P. Boynton .......... Third Vice-President
F. W. Power .............. Secretary
A. L. Knisely ............. Treasurer
A. W. Miller .............. Curator and Library

TRUSTEES.
A. L. Knisely, E. A. Beals, Ira E. Purdin.

EXECUTIVE COUNCIL.
W. N. Ferrin, W. T. Foster, F. W. Power,
Edmund P. Sheldon, J. D. Lee.

PROGRAM COMMITTEE.
Edmund P. Sheldon, A. L. Knisely,
Jane Stearns.

MEMBERSHIP COMMITTEE.
J. D. Lee, Prof. W. F. Fargo, Prof. W. P. Boynton,
Prof. David Torbet, F. W. Power.
Oregon Academy of Sciences

ANNUAL MEETING: MAY 9 and 10, 1913
at REED COLLEGE
PORTLAND, OREGON

OFFICERS:
President. W. T. FOSTER, Reed College
First Vice-President, W. P. BOYNTON, University of Oregon
Second Vice-President, T. D. BECKWITH, Oregon Agricultural College
Third Vice-President, JANE STEARNS
Secretary, E. P. SHELDON
Treasurer, A. L. KNISELY, Worcester Building
Librarian, A. W. MILLER

Trustees:
A. L. Knisely
E. A. Beals
I. E. Purdin

Executive Council:
W. T. Foster
John Gill
H. B. Torrey
W. E. Herring
E. P. Sheldon

Reduced Rates on All Railroads: One and one-third fare for the round trip to Portland; May 6 -- 11, going, May 9 -- 13, returning. Ask for certificate when purchasing ticket.
PROGRAM
FRIDAY, MAY 9, 1913

8:40 Chapel Service

Subject for the day: Pure Water

9:00-9:25 "Necessity for Pure Water"
T. D. Beckwith, M. S.,
Professor of Bacteriology,
Oregon Agricultural College

9:30-9:55 "Pollution in Sources of Supply"
A. C. Smith, M. D.,
of the Oregon State Board of Health

10:00-10:25 "Purification of Polluted Waters"
O. F. Stafford, M. A.,
Professor of Chemistry, University of Oregon

SATURDAY, MAY 10

8:40 Chapel Service

Pure Food and Drugs

9:00-9:25 "Safeguarding the City Food Supply"
Sarah A Evans,
President of the Oregon Federation of Women's Clubs

9:30-9:55 "Drugs"
H. V. Tartar.
Station Chemist, Oregon Agricultural College

10:00-10:25 "Flour"
John Fulton, M. S.,
Professor of Chemistry, Oregon Agricultural College

10:30-10:55 "The Federal Food and Drug Inspection Act"
A. L. Knisely

11:00-11:30 "Safeguarding the Milk Supply of the City" (Illustrated)
E. C. Callaway, City Milk Chemist

12:10 Room 204. Annual Business Meeting

Report of Secretary, E. P. Sheldon

Report of Committee on Academy Property
W. L. Finley, G. H. Himes, E. P. Sheldon

Report of Committee on Resolutions
E. A. Beals, David Rafferty, Jane Stearns

Report of Nominating Committee
P. L. Campbell, J. D. Lee, William Kletzer,
H. S. Jackson, H. N. Laurie

Election of Officers
Appendix J
Examples of Academy Printed Matter

1. Letterhead (1 January 1906 letter by Edmund P. Sheldon, Academy president).
   Source: Oregon Historical Society Library, Portland.

2. Letterhead (10 January 1913 letter by William T. Foster, Academy president).
   Source: Reed College Archives, Portland.

   Source: Oregon Historical Society Library, Portland.

   Source: Reed College Archives, Portland.
The Oregon State Academy of Sciences invites you to become a member. You will find a copy of the constitution enclosed herewith.

The Academy holds regular monthly meetings at the City Hall, Portland. These meetings are always free to the public, and are of such a nature that everyone who is interested in any branch of science from either a popular or scientific point of view will find them helpful and interesting.

Please read over the constitution carefully and seriously consider the benefits to be derived from membership. This is the only Academy of Science on the Pacific Coast, outside of California and it is bound to be a center of scientific thought and activity in the future.

If you decide to become a member, please sign the enclosed application blank and forward it to the recording secretary.

Yours very truly,
OREGON ACADEMY OF SCIENCES

ANNUAL MEETING: MAY 9 and 10, 1913

AT REED COLLEGE

10 January 1913

Dear Madam:

I have the honor to inform you that you have been nominated for membership in the Oregon Academy of Sciences.

The purpose for which the Academy was incorporated is "the promotion of scientific education by gathering thru periodical and migratory meetings all those in our community who are interested in the acquirement and development of knowledge for the betterment of mankind thru the observation of natural phenomena, and by creating a means of intercourse between those devoted to nature study, in aiding and encouraging their efforts in the prosecution of original investigations along scientific lines, and by collecting, preserving and exhibiting in museums natural history objects which are of scientific interest, so as to provide material that will assist in scientific investigation and public instruction thru the diffusion of knowledge".

The meetings for 1913 will be devoted to matters of genuine scientific value.

The membership fee for the first year is three dollars; for succeeding years, two dollars.

The regular meeting for January will be held on the third Saturday—January 18—at eight o'clock, in the East Side Library. Mr. William L. Finley, State Game Warden, will give an illustrated lecture on "The Life of the Three Arch Rocks Reservation". You are invited to attend with friends.

On Saturday, February 15, at 8 o'clock, at the East Side Library, Harry Beal Torrey, Ph.D., Professor of Biology in Reed College, will give an illustrated lecture on "Eugenics, from the Biological Standpoint".

Your acceptance of the invitation to become a member may be sent to Mr. A. L. Knizely, Worcester Building, Portland, by means of the enclosed blank.

Respectfully,

[Signature]

President
Oregon Academy of Sciences
Organized 1865  Incorporated 1890

This is to certify that

was elected a member of the

Oregon Academy of Sciences

on the day of

and having complied with the requirements of the constitution

is duly enrolled as a member of the Academy

President

Secretary
I have received notice of my nomination for membership in the Oregon Academy of Sciences. I shall be glad to become a member.

Signed

All checks should be made payable to A. L. Knisely, Treasurer, Worcester Building, Portland
Appendix K
Discussion of Three Academies of Science in Oregon

Too often historical beliefs are built on faulty assumptions. It is compelling at times to draw specific conclusions about events in the past using fragmentary or circumstantial evidence. Therein lies the danger of this methodology—once the "facts" are presented, further consideration or examination is discouraged. The long obscurity of the Oregon State Academy of Sciences (1905-1914) is a good example of this.

The currently active Oregon Academy of Science (founded 1943) has published two histories of itself in its Proceedings.* Both reports begin by discussing the Oregon Academy of Sciences, a Portland-based organization formed in 1892. They each briefly mention a seemingly minor name change in 1910—to Oregon Academy of Science—and continue onward with accounts of a reactivation of the organization in 1943 as the present Academy. The reader is left with the impression that there was one early academy that functioned from 1892 to around 1912.**

Assumptions regarding the historical development of state academies of science in Oregon, based on artificial similarities, led


**Both histories overlook the founding of a new academy in 1905. Gilfillan's history referred to "two organizations" but does not develop anything beyond that. He mentioned the transition between the two early academies in this way: "The records of the State Corporation Department in Salem show that the Academy was
to erroneous conclusions. These beliefs completely glossed over the identity and significance of the Oregon State Academy of Sciences. In 1978, the Oregon Academy of Science adopted a logo design stemming from this incomplete knowledge, announcing a founding date pushed back to the nineteenth century (Fig. 2).

Confusion from nearly identical names has hampered accurate documentation. When just the mere presence or absence of an "s" at the end of the word "science" determines the name of the Academy, problems of historical research and archival management are inevitable. Records from the three academies have been unknowingly mixed as a result of this problem.

dissolved on August 6, 1910, in order to make way for a new Oregon Academy of Science, which received its charter on August 18, 1910. Savage's approach was basically identical: "The old Oregon Academy of Sciences was dissolved on August 6, 1910, but was reincorporated only 12 days later as the new Oregon Academy of Science, a name change which appears to have very little significance. However, other charter changes may have been more profound." Both histories went on to discuss the "reorganization" of the old Oregon Academy of Science after 30 years of inactivity. It is apparent how the individual identities of the two early academies became lost in these accounts.
I have concluded from this research that in fact three distinct and independent academies of science have been organized in Oregon (Table 2). Each academy formulated its own constitution and articles of incorporation, molding their purposes differently, and each represented a unique membership (Table 3).
### Table 2

Chronology of state academies of science in Oregon

<table>
<thead>
<tr>
<th>Name</th>
<th>Organized</th>
<th>Incorporated</th>
<th>Ceased Activity</th>
<th>Dissolved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oregon Academy of Sciences</td>
<td>Jan. 6, 1892</td>
<td>Nov. 21, 1892&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1897(?)</td>
<td>Aug. 6, 1910</td>
</tr>
<tr>
<td>Oregon State Academy of Sciences&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Feb. 18, 1905</td>
<td>Aug. 18, 1910</td>
<td>1914</td>
<td>Dec. 31, 1945</td>
</tr>
<tr>
<td>Oregon Academy of Science</td>
<td>Oct. 27, 1943</td>
<td>Nov. 14, 1946</td>
<td>still active</td>
<td></td>
</tr>
</tbody>
</table>

Note: Information regarding incorporation and dissolution from the Oregon State Archives, Salem (Accession No. 78RC-60 Item 1).

<sup>a</sup>Organized as the Science Club of Portland.

<sup>b</sup>Incorporated as the Oregon Academy of Science, although the name was never standardized.
Table 3
Membership comparison between three academies of science in Oregon.

<table>
<thead>
<tr>
<th>Name</th>
<th>Total Membership</th>
<th>Common Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oregon Academy of Sciences</td>
<td>122&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Oregon State Academy of Sciences</td>
<td>98&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Oregon Academy of Science</td>
<td>331&lt;sup&gt;c&lt;/sup&gt;</td>
<td>4&lt;sup&gt;e&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>a</sup>Oregon Academy of Sciences, Manual for 1892.

<sup>b</sup>Active participants (86) plus names mentioned from various sources (12). Four of those shown as overlapping with the earlier Academy attended the organizational meetings in 1905 but never participated after that.


<sup>e</sup>Edward C. Callaway, Frank L. Griffin, Thornton T. Munger, and Willibald Weniger.