

William E. Castle Papers
(Bulk, 1950-1961) 1930-1961
Mss.Ms.Coll.14

American Philosophical Society
2002
105 South Fifth Street
Philadelphia, PA, 19106
215-440-3400
manuscripts@amphilsoc.org

Table of Contents

Summary Information	3
Background note	5
Scope & content	7
Administrative Information	8
Related Materials	8
Indexing Terms	8
Other Finding Aids	9
Other Descriptive Information	9
Bibliography	10
Collection Inventory	11
William E. Castle Papers.....	11

Summary Information

Repository	American Philosophical Society
Creator	Castle, William E., (William Ernest), 1867-1962
Title	William E. Castle Papers
Date [bulk]	Bulk, 1950-1961
Date [inclusive]	1930-1961
Call number	Mss.Ms.Coll.14
Extent	1.0 Linear feet
Location	LH-B-36-2
Language	English
Abstract	<p>A modest Midwesterner who became one of the most influential geneticists of the first half of the 20th century, William E. Castle spent his career at Harvard and the University of California working on patterns of inheritance in mice, horses, and a variety of other mammalian taxa. An early proponent of Mendelian theory, Castle was director of the Bussey Institution at Harvard for almost thirty years, helping to train a number of important geneticists.</p> <p>The Castle Papers contain one linear foot of correspondence dating primarily from the period after Castle's "retirement" to Berkeley in 1936 until his death in 1962, dealing almost exclusively with his research on horse breeding and the inheritance of coat coloration in horses. Castle's correspondence with his former student L. C. Dunn is an exception, focusing on mouse genetics and ranging to a variety of topics from the</p>

conduct of scientific research during the Second World War to Castle's interests in the early history of genetics.

Preferred Citation

Cite as: William Ernest Castle Papers, American Philosophical Society.

Background note

William Ernest Castle (1867-1962, APS 1910) was a zoologist and geneticist. A modest Midwesterner, he became one of the most influential geneticists of the first half of the twentieth century. He spent his career at Harvard University and the University of California, where he worked on patterns of inheritance in a variety of mammalian taxa. As a graduate student Castle was Charles B. Davenport's (1866-1944, APS 1907) laboratory assistant. His dissertation, "The Early Embryology of *Ciona intestinalis*," provided the first documentation of self-sterility in animals, and was published in the *Bulletin of the Museum of Comparative Zoology* in 1896. Castle was an ardent proponent of Mendelism, and he was also associated with the eugenics movement.

Castle was born in 1867 near Alexandria, Ohio, the son of William Augustus Castle and Sarah Fasset Castle. His parents were farmers, and young Castle's learning about livestock may have sparked his interest in questions related to heredity and evolution. Castle graduated from Denison College in 1889 and half-heartedly began a career teaching Latin at the University of Ottawa in Kansas. Three years with the classics, however, convinced him that his love of natural science might afford a more interesting future. Applying to enter Harvard with the senior class in 1892, he received his A.B., A.M., and Ph.D. in three successive years, during the course of which he became laboratory assistant to Davenport and switched to zoology. His dissertation, "The Early Embryology of *Ciona intestinalis*," which he completed in 1895 under the direction of Edward L. Mark (1847-?, APS 1907) provided the first documentation of self-sterility in animals. The following year Castle married Clara Sears Bosworth. The couple had three children.

After brief appointments on the faculties at the University of Wisconsin and Knox College, Castle returned to Harvard in 1897 to begin what would become a forty year career in the department of zoology. Like Davenport, Castle soon acquired an interest in the problems of heredity. After around 1900, he abandoned his work in morphology and embryology to focus on the study of genetics. Turning to the question of the hereditary basis of sexual differentiation, he began large scale breeding experiments using mice and rats. However, the rediscovery of Gregor Mendel's theory of inheritance changed the tenor of his work. Castle soon emerged as one of the most ardent of the early Mendelians in the United States. Helping to construct the framework of Mendelism in America -- his article "Mendel's Law of Heredity," which was published in the *Proceedings of the American Academy of Arts and Sciences* (1903), is often considered the first on the topic written by an American -- Castle applied his experimental skills to a variety of fundamental problems in mammalian genetics ranging from studies of the selection of Mendelian characters to the effects of inbreeding to linkage and gene mapping. In one of his best known and characteristically elegant experiments, conducted in 1909, he and John C. Phillips (1876-1938) transplanted the ovaries from a black guinea pig into an albino female and mated that female to an albino male. The progeny of the union were all black, neatly demonstrating that it was the genes, not the soma, that carried hereditary information. While best known for his work on mammals, he was also the first to use *Drosophila* for genetic experimentation, the organism that became synonymous with the work of Thomas Hunt Morgan (1866-1945, APS 1915). Although Castle strongly influenced the development

of Mendelian studies in the United States, he at times questioned the view that all inheritance could be explained in Mendelian terms.

Castle conducted much of his work as a research associate at the Station for Experimental Evolution at Cold Spring Harbor Laboratory. The Station, later renamed the Department of Genetics, was directed by Davenport and financed by the Carnegie Institute of Washington. The institution funded Castle's work from 1904 to 1943. In 1908 the Bussey Institution at Harvard was reorganized as a graduate school for applied sciences, and Castle relocated his lab, his mice and guinea pigs there. The arrival of Edward M. East (1879-1938, APS 1916) the following year transformed the Bussey into one of the two most active early centers of genetic study in the country. Castle served as Director of the Bussey until his retirement in 1936, at which time the institution was shuttered for economic reasons. Castle's influence, however, continued through his many graduate students who went on to careers in genetics, including Clarence C. Little (1888-1971), Leslie C. Dunn (1893-1974, APS 1943), Gregory Pincus (1903-1967), George D. Snell (1903-1996, APS 1985), Sewall Wright (1889-1988, APS 1932), and Sheldon C. Reed (1910-2003).

Castle's influence was also felt through his association with scientific eugenics during the 1920s, even though he was skeptical of the feasibility and desirability of eugenics to improve the human race. In 1916 he argued that human society could not be managed like a farm; subsequently he also claimed that genes did not determine social status, and that negative eugenics violated individual liberty. Nevertheless, his criticism of eugenics was rather conservative. For example, he believed that there could be social objections to the mixture of different races, and he agreed that the segregation and sterilization of the "feebleminded" was desirable. Unlike other notable scientists who eventually distanced themselves from the eugenics movement, such as Thomas Hunt Morgan and Herbert Spencer Jennings, Castle remained consistent in his advocacy, possibly because he did not want to offend his friend Davenport. He served on the advisory board of the Eugenics Record Office that was established by Davenport at Cold Spring Harbor in 1910, and he was a founder of the eugenically connected American Breeders' Association that was reorganized into the American Eugenics Society in 1913. Moreover, his textbook *Genetics and Eugenics* (1916) was widely used and went through four editions in fourteen years.

After receiving emeritus status from Harvard, Castle moved to the West Coast to become a research associate at the University of California, Berkeley. He spent an additional twenty five years in research, focusing on the genetics of coat coloration in horses. The last of his 242 scientific papers was published in 1961 at the age of 94. During his long career, he served as an officer for a number of professional societies and received his share of awards, including election to the American Academy of Arts and Sciences (1900), the American Philosophical Society (1910), the National Academy of Sciences (1915), the Genetics Society of America, and the American Genetics Association, which he served as vice president in 1924. He was also president of the American Society of Naturalists in 1919, and he was the first recipient of the Kimber Genetics Award of the National Academy of Sciences in 1955. Finally, he was a founder of the journal *Genetics* and a member of the editorial board of the *Journal of Experimental Zoology* from its initial issue in 1904 until his death in 1962.

Scope & content

Despite the length and importance of his career, the geneticist William E. Castle left only a slender documentary record. He appears to have disposed of old correspondence on a regular basis, and at his death in 1962, little remained. The Castle Papers contain one linear foot of correspondence dating primarily from the period after his "retirement" to the University of California Berkeley in 1936 until his death in 1962, dealing almost exclusively with his research on horse breeding and the inheritance of coat coloration in horses.

Much of Castle's surviving correspondence consists of letters to and from horse breeders, breeders' associations, and clubs for horse and pony breeds regarding the inheritance of coat color and patterns, and less often with other academic geneticists, such as Dewey Steele of the University of Kentucky and Miguel Odroziola of the Estación de Mejora de la Patata in Spain. Castle's most prolific correspondents during the period were Ralph Singleton of the Blandy Experimental Farm in Virginia and Ralph Armstrong, an attorney and pony breeder in Washington state, and like many others, they occasionally sent photographs documenting examples of particular coat colorations or, in the case of Armstrong, hair samples from unusual ponies.

Castle's correspondence with his former student L. C. Dunn is an exception, focusing on mouse genetics while ranging to a variety of other topics including Castle's retirement from Harvard (to make room, he notes, for younger researchers less set in their ways) and the closing of the Bussey Institution to the conduct of scientific research during the Second World War to Castle's interests in the early history of genetics. The collection is arranged alphabetically by writer.

Administrative Information

Publication Information

American Philosophical Society 2002

Provenance

Acquisition Information

The bulk of the collection was donated by Mrs. Ralph Singleton, 1982, however the letters to and from L. C. Dunn and E. C. MacDowell and Castle's autobiographical and genealogical notes were donated to the APS Library by L. C. Dunn in 1963 (accn. nos. 1963-169ms and 1963-224ms).

Processing Information

Recatalogued by rsc, 2002.

Related Materials

Related Material

The Printed Materials Department holds reprints of many of Castle's major works, along with a number of monographs, including:

- Castle, William E., *Genetics and eugenics : a text-book for students of biology* (Cambridge, Mass., 1916). **Call no.:** 575.1 C27g.
- Castle, William E., *Heredity in relation to evolution and animal breeding* (New York, 1911). **Call no.:** 575.1 C27.
- Castle, William E., *Mammalian Genetics* (Cambridge, Mass., 1940). **Call no.:** 575.1 C27m.

Castle appears as a correspondent in several collections at the APS, including the papers of [George W. Corner \(Ms. Coll. 11\)](#), , [Charles B. Davenport \(B D27\)](#), , [Milislav Demerec \(B D394\)](#), , [L. C. Dunn \(B D917\)](#), , [C. C. Li \(B L61\)](#), , and the [University of California Department of Genetics Collection \(378.794 C12gen\)](#).

Indexing Terms

Corporate Name(s)

- Blandy Experimental Farm (Boyce, Va.)
- Harvard University. Bussey Institution
- Welsh Pony Society of America.

Genre(s)

- Photographs

Personal Name(s)

- Bell, Donald C.
- Dunn, L. C. , (Leslie Clarence), 1893-1974
- Gregory, Paul Wallace, 1898-
- Odriozola, Miguel
- Singleton, W. Ralph (Willard Ralph), 1900-
- Steele, Dewey George, 1898-

Subject(s)

- Genetics--Research--United States
- Heredity
- Horses--Breeding
- Horses--Genetics
- Mice--Genetics
- Ponies--Genetics

Other Finding Aids

The Castle Papers are also described in Bentley Glass, *Guide to the Genetics Collections at the APS*.

Other Descriptive Information

This collection contains materials which relate to the history of genetics.

Author	Format	Date
Bell, Donald C.	Correspondence (3 folders)	1959-1961
Dunn, Leslie Clarence	Correspondence (2 folders)	1930-1962
Gregory, Paul Wallace	Correspondence (1 folder)	1950-1952
Odriozola, Miguel	Correspondence (1 folder)	1951-1961
Singleton, Willard Ralph	Correspondence (8 folders)	1958-1962
Steele, Dewey George	Correspondence (2 folders)	1960-1961
Welsh Pony Society of America	Correspondence (5 folders)	1951-1953

Bibliography

William E. Castle Papers

Collection Inventory

William E. Castle Papers	1930-1961	Box 1-2
American Shetland Pony Club	1951-1953	2 folders
Armstrong, Ralph	1949-1950	3 folders
Folder #1	1948	
Folder #2	1949 January-February	
Folder #3	1949 October-1951	
Berga's Pony Farm	1958	1 folder
Bell, Donald C.	1959-1961	3 folders
Blandy Experimental Farm	1958-1962	1 folder
Briggs, Fred N.	1952	1 folder
<i>California Horseman</i>	1953-1962	1 folder
Castle, William Ernest	n.d.	1 folder
Castle, William Ernest -- Autobiographical and genealogical notes	1952	2 items
Corey Pony Farm		1 folder
Creamcup Shetland Pony Ranch	1949-1954	1 folder
Davis, Deering, "Cromohipologia"	1951	2 folders
Dunn, L. C. (Leslie Clarence)	1930-1962	2 folders
Folder #1	1930-1938	19 items

William E. Castle Papers

Castle, William E., (William Ernest), 1867-1962 Oct. 17, 1930

Letter to [Leslie Clarence] Dunn;
Boston, Mass.,

A.L.S. 2p. (see Castle papers.) Concerning his experiments in genetics on white mice.

Castle, William E., (William Ernest), 1867-1962 Feb. 20, 1936

Letter to [Leslie C.] Dunn, New York;

A.L.S. 2p. In Pencil. (see Castle papers.) Publications on genetics. Is preparing to retire and close his laboratory at Harvard, and delighted in all his work there.

Pincus, Gregory, 1903-1967 Feb. 20, 1936

Letter to L[eslie] C. Dunn, New York;

Cambridge, Mass., Typed L.S. 1p. (see Castle papers.) Dr. Castle retires and will not be given laboratory space at Harvard. wonders if anything can be done?

Castle, William E., (William Ernest), 1867-1962 Feb. 25, 1936

Letter to [Leslie C.] Dunn;

Boston, Mass., A.L.S. 2p. (see Castle papers.) Concerning his future after retirement from Harvard.

Merriam, John Campbell, 1869-1945 March 3, 1936

Letter to L[eslie] C. Dunn, New York;

Washington, Typed L.S. 2p. (see Castle papers.) Concerning the studies Dr. Castle is making and attempts to further his studies.

Pincus, Gregory, 1903-1967 March 13, 1936

Letter to L[eslie] C. Dunn, New York;

William E. Castle Papers

Cambridge, Mass., Typed L.S. 1p. (see Castle papers.) Gives his knowledge of the situation at Harvard, pertaining to further studies by W.E.Castle on genetics.

Castle, William E., (William Ernest), 1867-1962 Sept. 8, 1938

Letter to [Leslie Clarence] Dunn;

Berkeley, Cal., A.L.S. 3p. (see Castle papers.) Genetic studies on rats and rabbits.

Castle, William E., (William Ernest), 1867-1962 Nov. 28, 1938

Letter to [Leslie Clarence] Dunn;

Berkeley, Cal., A.L.S. 2p. (see Castle papers.) Genetic studies on rats.

Castle, William E., (William Ernest), 1867-1962 Dec. 19, 1938

Letter to [Leslie Clarence] Dunn;

Berkeley, Cal., A.L.S. 1p. (see Castle papers.) Will have the experiments run on the rats for genetic research purposes.

Folder #2	1939-1962	20 items
-----------	-----------	----------

Castle, William E., (William Ernest), 1867-1962 Feb. 17, 1939

Letter to L[eslie] C. Dunn, New York City;

A.L.S.on postal card. 1p.and add. (see Castle papers.) Recommends Bridges for next portrait in Genetics.

Castle, William E., (William Ernest), 1867-1962 Feb. 20, 1939

Letter to [Leslie Clarence] Dunn;

Berkeley, Cal., A.L.S. 2p. (see Castle papers.) Genetics of short-tail mice.

William E. Castle Papers

Castle, William E., (William Ernest), 1867-1962 July 28, 1943

Letter to [Leslie C.] Dunn;

Berkeley, Cal., A.L.S. 3p.,end. (see Castle papers.) Concerning the role of the scientist in the War. Concerning science being organized, i.e. National Research Council: "Even as mild a form of bureaucracy as the National Reserch Council has, I think, limited usefulness and has resulted in waste of talent rather than its utilization."

Castle, William E., (William Ernest), 1867-1962 Sept. 24, 1943

Letter to [Leslie Clarence] Dunn;

Berkeley, Cal., A.L.S. 2p. (see Castle papers.) Genetics. Rabbit and rat colonies for genetic research.

Castle, William E., (William Ernest), 1867-1962 Dec. 31, 1954

Letter to [Leslie Clarence] Dunn;

Berkeley, Cal., A.L.S. 4p. (see Castle papers.) Death of Babcock. Genetics. Pertaining to the Little laboratory and questions need and desireability of a perpetual laboratory for working groups of scientists.

Castle, William E., (William Ernest), 1867-1962 Oct. 21, 1959

Letter to [Leslie Clarence] Dunn;

Berkeley, Cal., A.L.S. 2p. (see Castle papers.) Pertaining to genetics and ideas as to the writing a history of genetics.

Castle, William E., (William Ernest), 1867-1962 June 10, 1961

Letter to [Leslie Clarence] Dunn;

A.L.S. 1p. (see Castle papers.) Development of the history of genetics. Shryock offered the APS Library as central repository for materials, and he is willing.

William E. Castle Papers

Castle, William E. (William Ernest), June 4, 1962

1867-1962

Letter to Leslie C. Dunn, New York;

Boston, Mass., Typed L.S. 1p.,end. (see Castle papers.) Notifies him of the death of his father

Lerner, I. Michael(Isadore Michael),1910- June 14, 1962

Letter to L[eslie] C[larence] Dunn,
New York;

Berkeley, Cal., Typed L.S.: Mike. 1p. (see Castle papers.) Concerning Castle's bibliography.

Castle, William B., (William Bosworth), 1897- July 6, 1962

Letter to L[eslie] C. Dunn, New York;

Boston, Mass., Typed L.S. 1p.,end. (see Castle papers.) Is delighted that he will do a memoir of his father and will help in any way he can.

Lerner, I. Michael(Isadore Michael),1910- July 9, 1962

Letter to L[eslie] C. Dunn, New York;

Berkeley, Cal., Typed L.S.: Mike. 1p.,end. (see Castle papers.) Concerning gifts of pamphlets, papers, etc. of Dr. Castle to the Library, and the possibility of their being sent to the APS, or loaned to him.

Castle, William B., (William Bosworth), 1897- July 23, 1962

Letter to L[eslie] C. Dunn, New York;

Boston, Mass., Typed L.S.: Bill. 1p.,end. (see Castle papers.) Forwards photographs of his father and wants them returned.

Epperly, Walter	1959-1962	1 folder
Garber, E. D.	1952	1 folder

William E. Castle Papers

<i>Genetics</i>	1951-1952	1 folder
Genetics, Inc.	1951-1952	1 folder
Girardin, Ernest	1952	1 folder
Gillette, Mrs. Ben A., Jr.		1 folder
Goethe, C. M.	1951-1953	1 folder
Greene, Ivan B.	1952	1 folder
Gregory, P. W. (Paul Wallace)	1950-1952	1 folder
Guilliams, Louis	1960-1961	1 folder
Hallonquist, Harriet	1947	1 folder
Harnly, Ann	1961	1 folder
Heerman Bloodstock Agency	1961	1 folder
House of Hartz	1957-1958	1 folder
Howell, C. E.	1953	1 folder
Hutt, F. B.	1958	1 folder
King, Frank L.	1953	1 folder
King, Frank L.: Photographs of mares and colts	1950	1 folder
Loewus, Julian S.	1957	1 folder
McDaniel, Elizabeth H.	1960	1 folder
McDaniel, Mrs. Joseph Whiton	1962	1 folder
MacDowell, E. C.	1936	2 items
Marks' Palomino Pony Ranch	1958-1959	1 folder

William E. Castle Papers

Michigan Pony Club	1953	1 folder
<i>National Geographic</i>	1953	2 folders
Norman, John W.	1951	1 folder
Odriozola, Antonio	1951	1 folder
Odriozola, Miguel	1951-1961	1 folder
Palomino Horse Breeders of America	1951-1954	1 folder
Plank, Robert N.	1960	1 folder
<i>Quarter Horse Journal</i>	1961	1 folder
Shetland Acres -- Albino horse	1951	1 folder
Shetland Pony Ranch		1 folder
Singleton, W. Ralph (Willard Ralph)	1958-1962	8 folders
Folder #1	1958	
Folder #2	1959 March-June	
Folder #3	1959 July-December	
Folder #4	1960 February-June	
Folder #5	1960 July-December	
Folder #6	1961 January-June	
Folder #7	1961 July-1962	
Photographs	1960	
Smith, Frank H.	1953-1958	1 folder
Steele, Dewey G. (Dewey George)	1960-1961	2 folders

William E. Castle Papers

University of Kentucky	1960	1 folder
Unidentified -- horse lineages	n.d.	1 folder
Vencill, Robert	1958	1 folder
Welsh Pony Society of America	1951-1953	5 folders
Wentworth, Edward N.	1958	1 folder
<i>Western Livestock Journal</i>	1951	1 folder
Wilmot Stock Farms	1951-1954	1 folder
