Paul Kammerer Papers, 1910-1972

1910-1972

Mss.B.K128

American Philosophical Society
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Summary Information

Repository	American Philosophical Society
Creator	Kammerer, Paul, 1880-1926
Title	Paul Kammerer Papers, 1910-1972
Date	1910-1972
Call number	Mss.B.K128
Extent	0.25 Linear feet
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Abstract	The Austrian biologist Paul Kammerer was an outspoken proponent of the theory of inheritance of acquired characteristics (Lamarckism) during the time in which Mendelian theory was becoming deeply entrenched in biology. His major research efforts, straddling the First World War, centered on experiments performed on salamanders and on the midwife toad, and seemed to provide empirical support for a Lamarckian mechanism in evolution. He also developed a monistic "law of seriality," in which he attempted to explain coincidence as the product of a higher order natural law. A Socialist, Kammerer was widely regarded as a brilliant scientist, but for scientific, personal, and political reasons, he engendered as much antagonism as support, preventing him from ever obtaining a regular university appointment. His career ended tragically in allegations of fraud, followed by his suicide.

The Kammerer Papers is comprised of photocopies of materials that document the brief, but controversial career of a non-Darwinian evolutionary biologist. The bulk of the collection consists of photocopies of articles by Kammerer, often from obscure newspapers or periodicals, along with a small number of letters to his friend Hugo Iltis, the geneticist and biographer of Mendel. Nearly all of these pertain to the Kammerer's experiments with amphibians to test Lamarckian inheritance or to his other biological theories. The collection also includes a small number of items dating from after Kammerer's death, but relating to his life and work, including two letters from his former supervisor Hans Przibram, a letter from Hugh Iltis (Hugo's son) to Arthur Koestler and the reply, and a brief biographical reminiscence of Kammerer written by Hugo Iltis.

Preferred Citation

Cite as: Paul Kammerer Papers, American Philosophical Society.

Background note

The Austrian biologist Paul Kammerer was an outspoken proponent of the theory of inheritance of acquired characteristics (Lamarckism) during the time in which Mendelian theory was becoming deeply entrenched in biology. Though widely regarded as a brilliant scientist, he engendered opposition for both personal and political reasons that prevented him from ever obtaining a regular university appointment, and his career ended tragically in allegations of fraud, followed by his suicide.

Born in Vienna in 1880, Kammerer received his doctorate from the University of Vienna in 1904, and was shortly thereafter appointed as assistant at the University's Biologische Versuchsanstalt, working under Hans Przibram. From that time until his death in 1926, Kammerer engaged in experiments on amphibians in an attempt to test the possibility of Lamarckian inheritance. In his earliest work, he took specimens of two species of salamander with markedly different environmental preferences, switched their habitats, and bred them in the foreign environment. The black-colored viviparous alpine salamander *Salamandra alta* was bred in a warm, aquatic, lowland environment, and the spotted oviparous lowland species *Salamandra maculosa* in a cold and dry environment. The results were striking. Kammerer reported that each type acquired the coloration of the other in its new habitat, and the acquired color patterns proved to be heritable. Furthermore, after a period of adjustment, Kammerer reported that *S. alta* became oviparous and vice-versa for *S. maculosa*.

Kammerer's next series of experiments were even more provocative. His idea was to test whether a change in environment like the one he induced in his salamander work would produce a similar phenotypic shift in the midwife toad (*Alytes obstetricians*), a terrestrial species which lacks the pigmented "nuptial" thumb pads used by aquatic males to grasp females in mating. He concluded that the answer was yes: the environment could once again be shown to be a stimulus for the development of nuptial pads in the male, and these pads were inherited by male offspring even when returned to their original environment. Although Lamarckism had been widely accepted as an important evolutionary mechanism only a generation before, and although a number of recalcitrant Lamarckians still populated the field, Kammerer's empirical findings had a large impact, though much of it negative. In other work, he was no less controversial. An arch monist, he developed a "law of seriality," in which he attempted to explain coincidences or series of coincidences as manifestations of an underlying universal principle in nature that stands apart from physical causality.

While Kammerer's experiments were, in themselves theoretically challenging and controversial in the face of a solidifying Mendelism, they were made more so because of his political views and personality. A handsome man inclined to vanity and womanizing, Kammerer earned the envy and enmity of many. That he was a staunch Socialist, an atheist, and half Jewish on his mother's side, did little to help him in reactionary circles at the University, and his willingness to write for the popular press earned him the criticism of others who derided him as simply a journalist. His opponents prevented him from ever obtaining a proper university post, citing disapproval of his insistence on published *Das Gesetz der Serie* before obtaining the approval of the University Senate as reason. He spent most of his latter years as a Privat Dozent -- without pay.

Socialism may also have been one of the key elements behind Kammerer's receptivity to Lamarckian theory. Kammerer wrote that he saw evolution as the great hope that education could offer for the improvement of humanity, and his theories found a particularly appreciative audience among committed Socialists and Communists. The ideological coincidence earned Kammerer an invitation to join the faculty at Moscow University, an offer that the cultured and cosmopolitan native of Vienna did not immediately accept.

As news of his experiments began to spread in 1923, Kammerer left for a lecture tour of England, visiting Cambridge and the Linnaean Society in London, after which he traveled to the United States. As he lectured at universities from Yale to Johns Hopkins, Kammerer created something of a popular sensation, earning extravagant (and sometimes exaggerated) notice in the press for his ideas. In the scientific community, however, opinions ran the gamut from skepticism to denial: on the more positive end, Herbert Spencer Jennings remained open to the possibility of Lamarckian mechanisms, but at Cambridge, William Bateson sought actively to discredit him.

Kammerer's story diverted into tragedy in 1926 when G. Kingsley Noble of the American Museum and Przibram earned a rare invitation to visit Kammerer's laboratory in Vienna and examine his amphibians personally. During this visit, they discovered that the toad's nuptial pads had in fact been injected with India ink in order to produce the black coloration and swelling, and after they went to press with their accusations in the August 7, 1926, issue of *Nature*, the response was swift. Although Kammerer professed innocence, blaming an antagonistic assistant for the alteration, his reputation was sullied beyond repair. He accepted the position in a still-receptive Moscow, but Kammerer fell into a deep depression, suffering not only from the assaults on his character, but from poor finances and his wife's refusal to accompany him to Russia. He committed suicide en route to Russia. For almost three decades most, however, his work remained current in the Soviet Union, where his theories harmonized with the principles of Trofim Lysenko, head of the Institute of Genetics of the Soviet Academy of Sciences.

Scope & content

The Kammerer Papers is comprised of photocopies of materials that document the brief, but controversial career of the non-Darwinian evolutionary biologist, Paul Kammerer. The bulk of the collection consists of photocopies of articles written by Kammerer, often from obscure newspapers or periodicals, along with a small number of letters from Kammerer to his friend Hugo Iltis, the geneticist and biographer of Mendel. Nearly all of these pertain to the Kammerer's experiments with amphibians to test Lamarckian inheritance or to his other biological theories. The collection also includes a small number of items dating from after Kammerer's death relating to Kammerer's life and work, including two letters from his former supervisor Hans Przibram, a letter from Hugh Iltis (Hugo's son) to Arthur Koestler and the reply, and a brief biographical reminiscence of Kammerer written by Hugo Iltis.

With the exception of some of the material dating from after Kammerer's death, the collection is written exclusively in German. Typescripts of Kammerer's letters have been included.

Administrative Information

Publication Information

American Philosophical Society 2004

Provenance

Acquisition Information

Gift of Hugh H. Iltis, Sept. 20, 1973 (accn. no. 1973-2035ms).

Processing Information

Recatalogued by rsc, 2004.

Related Materials

Related Material

Kammerer appears as a correspondent in the Davenport (B D27), and Jennings (B J44) Papers at the APS.

Indexing Terms

Personal Name(s)

- Dunn, L. C. , (Leslie Clarence), 1893-1974
- Iltis, Hugh H. (Hugh Hellmut)
- Iltis, Hugo, 1882-1952
- Koestler, Arthur, 1905-1983
- Przibram, Karl, 1878-1973

Subject(s)

- Adaptation (Biology)

- Amphibians
- Evolution (Biology)
- Genetics--Austria
- Heredity
- Inheritance of acquired characters
- Lamarckism

Other Finding Aids

The Kammerer Papers are discussed in Bentley Glass' *Guide to Genetics Collections at the APS*.

Other Descriptive Information

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

Author	Format	Date
Dunn, Leslie Clarence -- Hugo Iltis - 1882-1952	Manuscripts (2 pages)	1953
Iltis, Hugo -- Curriculum Vitae	Manuscripts (1 page)	n.d.
Iltis, Hugo -- List of publications	Manuscripts (3 pages)	n.d.
Iltis, Hugo -- Paul Kammerer	Manuscripts (1 item)	Circa 1922
Iltis, Hugo -- Paul Kammerer	Manuscripts (1 item)	1951
Kammerer, Paul -- Curriculum Vitae	Manuscripts (1 item)	1910-1915

Kammerer, Paul -- Letters to Hugo Iltis	Correspondence (6 items)	1910-1920

Bibliography

Kammerer, Paul, *Adaptation and Inheritance in the Light of Modern Experimental Investigation* (Washington, 1913). **Call no.**: 506.73 Sm6an 1912

Kammerer, Paul, *The Inheritance of Acquired Characteristics* [transl. of Die Streitfrage der Vererbung erworbener Eigenschaften] (N.Y., 1924, 1984). **Call no.**: 575.1 R72h.r v.18

Collection Inventory

Paul Kammerer Papers	1910-1972	0.25 lin. feet	Box 1
Kammerer, Paul, 1880-1926 to Hugo Iltis	1910 July 6	ALS Cy, 2p.	Box 1

Please note that subject terms refer to all correspondence from Paul Kammerer to Hugo Iltis (6 items total). See below for the rest of the letters.

Indexing Terms

Subject(s)

Evolution
Genetics
Genetics -- Amphibians
Lamarck, Jean Baptiste Pierre Antoine de Monet de

Kammerer, Paul, 1880-1926 to Hugo Iltis	1910 July 9	ALS Cy, 1p.	Box 1
Kammerer, Paul, 1880-1926 Curriculum vitae	ca.1910-1915	ALS Cy, 1p.	Box 1
Kammerer, Paul, 1880-1926 to Hugo Iltis	1911 Dec. 28	Postcard Cy, 1p.	Box 1
Kammerer, Paul, 1880-1926 Mendelsche Regeln und Vererbung erworbener Eigenschaften	1911	Pr. Ms Cy, 39p.	Box 1

Article from *Verhanglungen des Naturforschenden Vereines in Brünn* 49 (1911): 72-110.

Kammerer, Paul, 1880-1926 Gefühl und Verstand	1914 May	Pr. Ms Cy, 8p.	Box 1

Sonderdrücl from *Monatsblätter der Deutschen onistenbundes Ortsgruppe Hamburg*.

Kammerer, Paul, 1880-1926 Zwei Janhre "Allgemeine Lebenslehre"	1914	Pr. Ms Cy, 15p.	Box 1

Article from *Cottage-Lyzeum* 1913/1914.

Kammerer, Paul, 1880-1926 Erbliche Anlastung	1916 ca. April 4	Pr. Ms Cy, 8p.	Box 1

Article from *Wiener Urania* on his experiments with salamanders.

Kammerer, Paul, 1880-1926 to Hugo Iltis	1919 Sept. 1	TLS Cy, 2p.	Box 1
Kammerer, Paul, 1880-1926 to Hugo Iltis	1919 Dec. 19	TLS Cy, 2p.	Box 1
Kammerer, Paul, 1880-1926 Lebensbeherrschung: Grundsteinlegung zur organischen Technik	1919	Pr. Ms. Cy, 2p.	Box 1

Published as *Monistische Bibliothek* 13 (1919).

Kammerer, Paul, 1880-1926 Dunkeltiere im Licht und Lichttiere im Dunkel	1920 Jan. 9	Pr. Ms. Cy, 8p.	Box 1

Published in *Naturwissenschaften* 13 (1920): 28-35.

Kammerer, Paul, 1880-1926 to Hugo Iltis	1920 Jan. 17	Postcard Cy, 2p.	Box 1
Kammerer, Paul, 1880-1926 Brief vom Wörtersee	1920 Sept. 14	Pr. Ms. Cy, 1p.	Box 1

Published in *Der Abend*, p.3.

Kammerer, Paul, 1880-1926 Richard Semon: zur Wiederkehr seines todestages Published in *Der Abend*, no.294.	1920 Dec. 27	Pr. Ms. Cy, 2p.	Box 1
Kammerer, Paul, 1880-1926 Entwicklungsmechanik der Seele Published in *Der Freie Gendanke* (Prague), 1, 7 (1920): 3.	1920	Pr. Ms. Cy, 2p.	Box 1
Kammerer, Paul, 1880-1926 Hilfreiche Entlastung Published in *Der Abend*.	1921 Jan. 26	Pr. Ms. Cy, 2p.	Box 1
Kammerer, Paul, 1880-1926 Zufall Published in *Der Abend*.	1921 Mar. 16	Pr. Ms. Cy, 2p.	Box 1
Kammerer, Paul, 1880-1926 Der Kreislauf des Geschehens Published in *Berliner Tageblatt*.	1921 July 3	Pr. Ms. Cy, 2p.	Box 1
Kammerer, Paul, 1880-1926 Welt-Widerhall Seele Published in *Der Abend*.	1921 July 5	Pr. Ms. Cy, 2p.	Box 1
Kammerer, Paul, 1880-1926 Jungbrunnen der Wissenschaft Published in *er Abend*?.	ca.1921 July 10	Pr. Ms. Cy, 2p.	Box 1
Kammerer, Paul, 1880-1926 Über Verjüngung und Verlängerung des persönlishen Lebens	1921	Pr. Ms. Cy, pp.7-16 only	Box 1

Published in Stuttgart.

Kammerer, Paul, 1880-1926 Zensur und Wissenschaft Published in *Der Abend*.	ca.1921	Pr. Ms. Cy, 2p.	Box 1
Iltis, Hugo Paul Kammerer Published in unknown source.	ca.1922	Pr. Ms. Cy, 2p.	Box 1

Indexing Terms

Subject(s)

Biographical and personal data -- Kammerer, Paul
Publication

Przibram, Hans, 1874- to Hugo Iltis On Lamarckian evolution.	1923 July 23	ANS Cy, 1p.	Box 1
Molish, Hans(?) Dr. Kammerer und die Wiener Universität Published in *Neue Freie Presse* (Wien).	ca.1924	Pr. Ms. Cy, 1p.	Box 1
Notices on Kammerer's death	1926	Pr. Ms. Cy, 4p.	Box 1
Przibram, Hans, 1874- to Hugo Iltis On Lamarckian evolution.	1930 Feb. 9	ALS Cy, 3p.	Box 1

Iltis, Hugo Die Abstammung Gregor Mendels, Julius Wiesners und Hans Molischs	ca.1938	Pr. Ms. Cy, 5p.	Box 1

Published in *Prager Rundschau* 8 (1938): 299-304.

Iltis, Hugo Paul Kammerer	1951	Pr. Ms. Cy, 4p.	Box 1

Dictated to Hugh H. Iltis.

Indexing Terms

Subject(s)

Biographical and personal data -- Kammerer, Paul
Unpublished manuscripts, notes, etc.

Dunn, L. C. , (Leslie Clarence), 1893-1974 Hugo Iltis: 1882-1952	1952 Jan. 2	Pr. Ms Cy, 2p.	Box 1

Published in *Science* 117 (1953): 3-4.

Indexing Terms

Subject(s)

Biographical and personal data -- Iltis, Hugo
Publication -- Science

Iltis, Hugh H. (Hugh Hellmut) to Arthur Koestler	1972 Aug. 30	TLsS Cy, 4p.	Box 1

Re: *Case of the Midwife Toad*.

Koestler, Arthur to Hugh H. Iltis Re: *Case of the Midwife Toad*.	1972 Sept. 9	TLsS Cy, 2p.	Box 1
Bernfeld, Anne Ein Wiener Gelehrte	n.d.	Pr. Ms Cy, 1p.	Box 1
Hahn, Arnold Verführung durch Experiment	n.d.	Pr. Ms Cy, 1p.	Box 1
Iltis, Hugo Curriculum vitae	n.d.	TMs, 1p.	Box 1
Iltis, Hugo List of publications	n.d.	TMs, 3p.	Box 1
Kammerer, Paul, 1880-1926 Das biologische Zeitalter: Fortschritte der organischen Technik	n.d.	Pr. Ms, 20p.	Box 1
Kammerer, Paul, 1880-1926 Wilhelm Bülsche zum sechsigsten Geburtstag	n.d.	Pr. Ms, 3p.	Box 1
Kammerer, Paul, 1880-1926 Naturgeschichte des Strassenkämpfe	n.d.	Pr. Ms, 4p.	Box 1
Kammerer, Paul, 1880-1926 Organischen und soziale Technik	n.d.	Pr. Ms, 2p.	Box 1