



Smithsonian Institution Archives

Walter Shropshire Oral
History Interviews, 1998-2000

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Table of Contents

Collection Overview	1
Administrative Information	1
Historical Note.....	1
Introduction.....	1
Descriptive Entry.....	2
Names and Subjects	2
Container Listing	3

Collection Overview

Repository:	Smithsonian Institution Archives, Washington, D.C., osiaref@si.edu
Title:	Walter Shropshire Oral History Interviews
Identifier:	Record Unit 9597
Date:	1998-2000
Extent:	18 audiotapes (Reference copies).
Creator::	Shropshire, Walter, interviewee
Language:	English

Administrative Information

Preferred Citation

Smithsonian Institution Archives, Record Unit 9597, Walter Shropshire Oral History Interviews

Use Restriction

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Historical Note

Scientific research has always been essential to the Smithsonian Institution's mission. These interviews focus on the history of the Smithsonian's Division of Radiation and Organisms, which became the Radiation Biology Laboratory and later the Smithsonian Environmental Research Center, focusing on the effects of sunlight on living organisms. The interviewee, Walter Shropshire, a research scientist with RBL, worked at the Institution for thirty-two years. His reminiscences span from his early childhood in Washington, D.C., to his second career as a pastor. The topics covered include background information about his education and personal life; studies at The George Washington University; early work in the basement laboratories of the Smithsonian Institution Castle; scientific research for RBL; participation in Smithsonian symposia; collaboration with other scientists of his era; conducting research abroad; his administrative duties at RBL; working as a Methodist pastor; and an in-depth conversation about photographs from the early years of the Smithsonian's Division of Radiation and Organisms and RBL.

Introduction

The Smithsonian Institution Archives began its Oral History Program in 1973. The purpose of the program is to supplement the written documentation of the Archives' record and manuscript collections with an Oral History Collection, focusing on the history of the Institution, research by its scholars, and contributions of its staff. Program staff conduct interviews with current and retired Smithsonian staff and others who have made significant contributions to the Institution. There are also reminiscences and interviews recorded

by researchers or students on topics related to the history of the Smithsonian or the holdings of the Smithsonian Institution Archives.

The Walter Shropshire, Oral History Interviews were recorded to document the history of the Smithsonian Institution's Division of Radiation and Organisms (DRO) of the Smithsonian Astrophysical Observatory (SAO), which then became the Radiation Biology Laboratory (RBL) and later the Smithsonian Environmental Research Center (SERC).

Descriptive Entry

Pamela M. Henson, Historian, from the Smithsonian Institution Archives, conducted these interviews as a part of the Smithsonian Institution Archives' Oral History Collection. These interviews cover the history of the Smithsonian's Radiation Biology Laboratory; the research conducted by its staff; the challenges faced by administrators; changes in the scientific field of biophysics; and Shropshire's personal life and pastoral career. Interviews of Shropshire include audiotape sessions and photographs.

The Walter Shropshire, Oral History Interviews consist of 16 interview sessions, totaling approximately 15 hours of audiotape recordings and 684 pages of transcript.

Names and Subject Terms

This collection is indexed in the online catalog of the Smithsonian Institution under the following terms:

Subjects:

- Biology -- Fieldwork
- Botany
- Interviews
- Methodist Church -- Clergy
- Oral history
- Photobiology
- Religion and science

Types of Materials:

- Audiotapes
- Transcripts

Names:

- Delbrück, Max
- Henson, Pamela M., interviewer
- Joys of Research, The (Symposium)
- Klein, William H. (William Harvey)
- Shropshire, Walter
- Smithsonian Astrophysical Observatory
- Smithsonian Astrophysical Observatory. Radiation and Organisms Division
- Smithsonian Environmental Research Center
- Smithsonian Environmental Research Center. Division of Radiation and Organisms
- Smithsonian Institution. Division of Radiation and Organisms
- Smithsonian Radiation Biology Laboratory
- Withrow, Robert B. (Robert Bruce), 1904-1958

Container Listing

Interviews

Interviews

Interview 1: November 2, 1998

Interviews

Covers Shropshire's youth and early career interests, friendships, and accomplishments, including: childhood, early education, interest in science as a young boy, and his early mentors; religious experience at Vacation Bible School; visiting the Smithsonian Institution with his cousin; undergraduate education and research at George Washington University; graduate education and research at George Washington University, working with and learning from George Gamow and Joseph Chew; early research with Robert Bruce Withrow in the Smithsonian Institution Astrophysical Observatory, Division of Radiation and Organisms; working as a post-doc at California Institute of Technology, friendship with Max Delbrück, working and living with future Nobel Laureates at the "Boys' House," camping, and cracking comma free codes; returning to the Smithsonian Institution, living in Washington, D.C., attending events at Smithsonian Institution galleries; living in the Smithsonian Castle, talking with astrophysicist and Smithsonian Secretary Charles Greeley Abbot, especially about his inventions and research; origin of Division of Radiation and Organisms; Secretary Samuel P. Langley's experiments and the Langley/Wright controversy; creation of the field of biophysics, Shropshire's dissertation topic and fields of study; the Russian satellite *Sputnik* launched in 1957; and reminiscences of Secretary S. Dillon Ripley and Secretary Leonard Carmichael, c. 1932-1960s.

Interviews

Transcript, pp 1-53, of audiotape recording, 1 hour.

Interviews

Audio Recordings of Interviews: Total recording time: 1 hour

Note:

- Original Masters: 2 7" reel-to-reel tapes
- Preservation Masters: 2 digital .wav files
- Reference Copies: 1 audiotape cassette, 2 digital .mp3 files

Interviews

Interview 2: February 29, 2000

Interviews

Discusses Shropshire's college and post-graduate years and early career at the Smithsonian, including: part-time work in George Washington University Botany Lab, learning laboratory techniques, getting his name in published research; witnessing an attempt on President Harry S. Truman's life at Blair House; stamp collecting and meeting Secretary Alexander Wetmore in stamp shop; southeast Washington, D.C., bike riding; reminiscences of family, Central Market, National Museum of Natural History, and Butterfly Garden; International Geophysical Year and the Korean War; post-doc with Max Delbrück, tennis matches, Cold Spring Harbor, mixing science with leisure, camping trips; returning to the Division of Radiation and Organisms, working with Robert Bruce Withrow and Alice P. Withrow, drawing drafts of data, conducting research and experiments, death of Robert Withrow, practical

jokes in the laboratory; and reminiscences of Secretary S. Dillon Ripley and fellow employees in the laboratory, jobs and relationships in the lab, c. 1953-1960s.

Interviews

Transcript, pp. 54-110, of audiotape recording, 1 hour.

Interviews

Audio Recordings of Interviews: Total recording time: 1 hour

- Note:
- Original Masters: 2 7" reel-to-reel tapes
 - Preservation Masters: 2 digital .wav files
 - Reference Copies: 1 audiotape cassette, 2 digital .mp3 files

Interviews

Interview 3: March 20, 2000

Interviews

Covers Shropshire's college education and early years at the Smithsonian, including: early research and publishing at George Washington University; mastering lab techniques; participating in research with Dr. Benjamin van Evera; attending seminars at George Washington University; preparation for Ph.D. oral exam; researching, working and learning from Robert Withrow at the Smithsonian; working at the Division of Radiation and Organisms, learning the politics of the laboratory, dealing with tensions in the division, and finding equipment supplies; and building scientific instruments and gaining experiences in engineering and carpentry, c. 1953-1960's.

Interviews

Transcript, pp. 111-134, of audiotape recording, 0.5 hour.

Interviews

Audio Recordings of Interviews: Total recording time: 0.5 hour

- Note:
- Original Masters: 1 7" reel-to-reel tape
 - Preservation Masters: 1 digital .wav file
 - Reference Copies: 1 audiotape cassette, 1 digital .mp3 file

Interviews

Interview 4: April 3, 2000

Interviews

Discusses Shropshire's early career at the Smithsonian, including: early research at the Division of Radiation and Organisms, researching mitochondria and sorting through scientific literature; living in the ninth floor of the Smithsonian Institution Castle's North Tower, the other offices and rooms in the tower; working in the tower, elevator issues, solar radiation on the roof, long hours, bringing his family to watch fireworks on the Fourth of July; the Division of Radiation and Organisms sheds in the Smithsonian's South Yard, storage spaces in the Castle's basement; materials used in the laboratory, Waltham clocks, learning how equipment was made and designed; relationships between SI researchers and administrators; equipment made in the laboratory by the machine shop, metal work, and glassblowing craftsmen; relationships with other departments, National Herbarium, Mary Agnes Chase and Lyman Smith; spending weekends roaming the Smithsonian Castle, security issues; relationship with Secretary Charles Greeley Abbot, listening to his stories; designing, constructing, and

installing equipment with Withrow; work in the South Yard sheds, relationship between Secretary Abbot and Secretary Langley, Abbot's scientific research; solar radiation research, relationship between Secretary Abbot and SAO director Fred L. Whipple; Whipple's relationship with the Division of Radiation and Organisms, Paul E. Garber's relationship with the Division of Radiation and Organisms, small size of the Smithsonian Institution in those days, and Rocket Row; and getting material from U.S. Army surplus and lost materials, c. 1956-1960s.

Interviews Transcript, pp. 135-178, of audiotape recording, 1 hour.

Interviews Audio Recordings of Interviews: Total recording time: 1 hour

- Note:
- Original Masters: 2 7" reel-to-reel tapes
 - Preservation Masters: 2 digital .wav files
 - Reference Copies: 1 audiotape cassette, 2 digital .mp3 files

Interviews **Interview 5: April 24, 2000**

Interviews Covers Shropshire's career, including: learning about photography from Robert Withrow; description of the Smithsonian Institution Castle's floor plan; values of drafting and photography skills; problems of title for his position, rigid civil service categories, problem with categorizing biophysics, charter membership in the Biophysical Society, and early developments in the field of biophysics; the launch of *Sputnik*, prospects of space travel, impact on science; various grants and funds for the laboratory, including the National Science Foundation and Atomic Energy Commission; tensions between the Division of Radiation and Organisms and the Museum of Natural History, Senate of Scientists; competition with SAO for funds, grant writing, General Electric and Westinghouse grants, army surplus supplies; split from SAO to become an independent laboratory in 1963, with increased funding; William Klein as an administrator, SI administrator's trips to the Arlington Bowling alley, setting research goals for the laboratory, funding, payrolls, and personnel management; his role as assistant director of the laboratory, including the hiring process; travel funds and the Foreign Currency Program; closing of the laboratory; establishing international connections, papers at international conferences and student researchers in the laboratory; progress of the field of biophysics; involvement in professional societies, membership in the American Society for Plant Physiology, Biophysical Society, Plant Physiology Society, and the American Society for Plant Photobiology, including Klein's work for the Plant Physiology Society; Shropshire's involvement in the Biophysical Society and American Society for Plant Photobiology, as well as changes in the field of photobiology; and Klein's involvement with the International Solar Energy Society, people involved in the network of scientists, Klein's involvement with the Atomic Energy Commission, c. 1950s-1960s.

Interviews Transcript, pp. 179-224, of audiotape recording, 1 hour.

Interviews Audio Recordings of Interviews: Total recording time: 1 hour

- Note:
- Original Masters: 2 7" reel-to-reel tapes
 - Preservation Masters: 2 digital .wav files
 - Reference Copies: 1 audiotape cassette, 2 digital .mp3 files

Interviews

Interview 6: May 22, 2000

Interviews

Addresses Shropshire's career at RBL, including: Gatlinburg Symposium on Photomorphogenesis and visiting scientists; Shropshire's sabbatical at the University of Freiburg in Germany, with Hans Mohr, and his application process for sabbatical; work with David Correll and John Edwards on phytochrome, including disputes about research; the decision to move RBL out of the Smithsonian Castle, finding a new building, Secretary S. Dillon Ripley's decision to build a laboratory, and designing the laboratory in Rockville, Maryland; closing RBL for a year, compiling an annotated bibliography of phytochrome research; RBL rooms in the mid-1960s, rooms in the South Shed in the Smithsonian's South Yard, and use of the laboratory's carbon arc lamp; producing a movie on light effects called *Secrets of Life* with NBC; working on the Consortium of Washington, D.C., Area Universities, selecting topics for the Consortium, inviting lecturers for the Consortium, establishing relationships with local universities, S. Dillon Ripley's thoughts on granting degrees from the Smithsonian Institution, establishing contacts at the National Institute of Health; conflicts with the National Museum of Natural History and conflicts over laboratory procedures; Foreign Currency Program collaboration, solar radiation research in Sri Lanka, India and Israel; Shropshire's lectures at the University of Maryland, universities involved in the Consortium, Smithsonian employees and offices involved with the Consortium, end of the Consortium; scientists involved in the Consortium and controversial topics discussed at Consortium programs; assassination of Martin Luther King, Jr., and the subsequent 1968 riots in Washington, D.C.; attempt at creating a program for African American students from the University of the District of Columbia; low pay of research scientists, 1960s salaries, hiring pay for a research scientist; trip to research site at Table Mountain in California, closing of Table Mountain station, and consolidating SAO research sites; changing technology for measuring solar radiation, introduction of computer programs such as FORTRAN, minimal computer collaboration with SAO, problems with early computer systems; shifting interests to molecular biology; Smithsonian during the 1968 riots, keeping the laboratory open, maintaining experiments during the riots, bomb scares, and evacuations of Smithsonian buildings during the riots; changes in security at the Smithsonian, introduction of I.D. tags; maintaining experiments despite weather, timeline of a phytochrome experiment, phytochrome experimental procedures; Atomic Energy Commission grant, lack of hiring restrictions; working at the RBL's Parklawn facility, security issues at Parklawn, and Shropshire's move to Maryland; difficulties of transportation to the Smithsonian buildings on the National Mall and to SERC, and development of SERC; Secretary Ripley's relationship to RBL and Ripley's administrative style; William Klein's role and sabbatical with the Atomic Energy Commission, Shropshire's role in writing contracts and annual reports; difficulty in finding funding, funding from commercial firms, including relationship with commercial lighting firms, and construction of special light chambers at Parklawn; and consultation for the National Aeronautics and Space Administration (NASA), connection to Gilbert Gude, Klein's connection

to the Solar Energy Society, research for various associations, concerns with relationships with commercial organizations, c. 1960s-1970s.

Interviews Transcript, pp. 225-268, of audiotape recording, 1 hour.

Interviews Audio Recordings of Interviews: Total recording time: 1 hour

- Note:
- Original Masters: 2 7" reel-to-reel tapes
 - Preservation Masters: 2 digital .wav files
 - Reference Copies: 1 audiotape cassette, 2 digital .mp3 files

Interviews **Interview 7: June 8, 2000**

Interviews Discusses Shropshire's career at RBL, including: history of RBL in the mid-1960s to early 1970s; James Mathew McCullough's connection to the CIA, McCullough's work on *Arabidopsis* seedlings for RBL, the role of *Arabidopsis* in genetic studies today; Shropshire's trip to the University of Moscow for a Biophysical Society lecture, CIA's attempt to recruit Shropshire; chairing the Congressional Research Service's meeting on bioethical issues, Shropshire's religious beliefs in relationship to science, engaging in bioethical conversations early in his scientific career, and Max Delbrück's role in discussing bioethical issues; ethical issues at the Smithsonian Institution, racial and class issues at the Smithsonian, Smithsonian hierarchies, struggle for administrative power within the branches of the Smithsonian, and status issues within the Smithsonian; Shropshire's work with Rebecca Gettens Hayes on *Phycomyces*, Gettens Hayes' role in the laboratory, problems with Shropshire and Gettens Hayes' research publication on *Phycomyces*, retraction of the *Phycomyces* paper, refining research and collaborating with other researchers, scientific method; *Arabidopsis* research; personnel issues; Shropshire and his wife's friendship with Douglas Hayes and Rebecca Gettens Hayes, vacations to Culpepper, Virginia, camping trips with fellow employees, relationships in the laboratory, and where employees of the laboratory lived; Ripley's feelings on the class issues and old systems of the Smithsonian; Smithsonian staff teaching at local universities and graduate students working at the RBL; work with chemical inhibitors from the Sandoz Company, issues surrounding authorship on publications, the role of publication lists in the hiring process; publishing with Max Delbrück, Delbrück winning a Nobel Prize; graduate students' work in the laboratory; growth of RBL in the early 1970s, Civil Service Commission increase in federal employees, new employee additions to the laboratory; lighting chambers at the laboratory created by Don Widmayer; and scientists working in the laboratory and the research they conducted, c. 1960s-1970s.

Interviews Transcript, pp. 269-317, of audiotape recording, 1 hour.

Interviews Audio Recordings of Interviews: Total recording time: 1 hour

- Note:
- Original Masters: 2 7" reel-to-reel tapes
 - Preservation Masters: 2 digital .wav files

- Reference Copies: 1 audiotape cassette, 2 digital .mp3 files

Interviews

Interview 8: July 24, 2000

Interviews

Covers Shropshire's career at the RBL and SERC, including: work with the Atomic Energy Commission in the 1970s and 1980s, increase of Shropshire's administrative duties, balancing laboratory work with administrative duties, and drafting illustrations of experiments; Shropshire's work schedule, playing bridge at the Parklawn laboratory, and administrative work at lunch; Shropshire's work with Max Delbrück at Cold Spring Harbor, collaborative work, work under the Atomic Energy Commission grant, Shropshire as principal investigator, and Smithsonian employees' increasing contribution to the Atomic Energy Commission experiments; Smithsonian research grants, the importance of grants in RBL, issues of principal investigators and publications, problems caused by the laboratory's administrative structure, and Klein's limited experimental work; authorship on papers, importance of citation indexes, Delbrück's philosophy on authorship, changes the digital age has made in the publication process, and note keeping in a pre-Xerox age; differences between Robert Withrow and William Klein's administrative styles and transition in the world of scientific research in regards to authorship; Shropshire's offers to leave the Smithsonian, benefits of working at the Smithsonian, teaching relationship with George Washington University, and old system of job hiring; present day advances in field; Shropshire's nickname; difficulty in moving back to the university from the Smithsonian, and writing monographs; competition in Shropshire's field, phytochromes, photobiology as a small field, commercial applications of photobiology, influence of genetics on photobiology; visiting researchers working with solar energy, impact of evolution and environmental studies on all scientific fields; and Secretary Abbot and the Division of Radiation and Organisms, speculation about solar energy research, and importance of the development of light sources in the history of science, c. 1970s-1980s.

Interviews

Transcript, pp. 318-366, of audiotape recording, 1 hour.

Interviews

Audio Recordings of Interviews: Total recording time: 1 hour

- Note:
- Original Masters: 2 7" reel-to-reel tapes
 - Preservation Masters: 2 digital .wav files
 - Reference Copies: 1 audiotape cassette, 2 digital .mp3 files

Interviews

Interview 9: August 7, 2000

Interviews

Discusses Shropshire's career at SERC's Parklawn facility, including: the move to the Parklawn facility in 1971 and designing the new facility for laboratory work; new areas of sun research, attempts to increase federal staff and funding, Secretary Ripley's support of RBL, and the Smithsonian Research Foundation; seminar series at Parklawn, collaboration in the lab, carbon dating lab, fellow employees' research, solar energy measurements, and commuting from Parklawn to other Smithsonian facilities; work with

computers, relationship with SAO, problems over data reduction, David Correll's work at SERC, as well as collaborative work with the Smithsonian Tropical Research Institute, the National Museum of Natural History, and the National Institutes of Health; post-doctoral student research, action spectra experiments, and Parklawn's greenhouse; closing of the laboratory and impact on the researchers; how the move to Parklawn impacted employees, work schedules of RBL employees, personnel problems at the laboratory; Shropshire's increasing administrative responsibilities and balance with research, work with the Office of Personnel Management; the Solar Energy Society, travel funds at RBL, dual passport system, CIA's interest in Smithsonian employee travel, and international contacts; solar energy measurements and the hydraulic lift, using solar energy, and stock investments; and the Senior Executive Service, c. 1970s-1980s.

Interviews Transcript, pp. 367-388, of audiotape recording, 0.5 hour.

Interviews Audio Recordings of Interviews: Total recording time: 0.5 hour

- Note:
- Original Masters: 1 7" reel-to-reel tape
 - Preservation Masters: 1 digital .wav file
 - Reference Copies: 1 audiotape cassette, 1 digital .mp3 file

Interviews **Interview 10: August 15, 2000**

Interviews Continues Shropshire's career at SERC at the Parklawn facility, including: construction of the Parklawn facility; Secretary Ripley's Smithsonian Commons, transformation of the Smithsonian Castle; picking a location for Parklawn, designing the new laboratory, Smithsonian contract with the Danac Corporation, impact of moving to Parklawn; problems with being far from the National Mall, commuting to SERC; Shropshire's *Phycomyces* experiments, technician John Azzara, Agent Orange, and the Smithsonian Fluid Research Fund; administrative duties for RBL, personnel issues, increase in support staff at Parklawn, security issues at Parklawn, and negotiations with Danac; design of the floor plan at Parklawn, laboratory facilities at Parklawn, current occupants of the building, Pharmacopeia and the Department of Health, Education and Welfare Parklawn buildings; hydraulic lift used for solar measurements, thoughts about the Parklawn facility, and aid from the United States Department of Health Education and Welfare; collaboration with the National Institutes of Health; relationship to other Smithsonian scientific research centers, seminars at SERC, and issues with the Museum of Natural History; the Consortium of Universities of the Washington Metropolitan Area series, format of the meetings, famous guest lecturers, and funding problems with the consortium; and the assassination of Martin Luther King, Jr, 1960s-1980s.

Interviews Transcript, pp. 389-411, of audiotape recording, 0.5 hour.

Interviews Audio Recordings of Interviews: Total recording time: 0.5 hour

- Note:
- Original Masters: 1 7" reel-to-reel tape
 - Preservation Masters: 1 digital .wav file

- Reference Copies: 1 audiotape cassette, 1 digital .mp3 file

Interviews

Interview 11: August 28, 2000

Interviews

Covers Shropshire's role in the Joys of Research Symposium, including: Einstein Centennial Program, *The Joys of Research* publication, involvement of high school and college students, questions asked at the lectures, Einstein's life, meetings dealing with the symposium, and concert at the symposium by William Schuman; topics presented at the symposium, speakers at the symposium, program formats, and interaction between speakers and students; Shropshire's role in editing the symposium publication; employees on the program committee, response from the student audience, administrators involved in the program, publishing through Smithsonian Press, and work with Smithsonian Associates; and scientists that did not attend, c. 1970s-1980s.

Interviews

Transcript, pp. 412-437, of audiotape recording, 0.5 hour.

Interviews

Audio Recordings of Interviews: Total recording time: 0.5 hour

Note:

- Original Masters: 1 7" reel-to-reel tape
- Preservation Masters: 1 digital .wav file
- Reference Copies: 1 audiotape cassette, 1 digital .mp3 file

Interviews

Interview 12: September 11, 2000

Interviews

Discusses research at RBL, and the merger of the Chesapeake Bay Center for Environmental Studies (CBCES) with RBL to form SERC, including: changes in research at RBL Parklawn facility, increase in laboratory size, Carbon Dating Laboratory, layout of the new building, location of scientists and the research they conducted; Robert Weintraub's experiments with growth regulators; David L. Correll's environmental research and his experiments with carbon dioxide; Elisabeth Gantt's work with photographic measurements from the transmission electron microscopy; Maurice Margulies working on chloramphenicol and cycloheximide; dark room experiments, rooms at Parklawn, Don Widmayer's environmental control chambers, and plants used in various experiments; carotenoid synthesis experiments; Gerald Deitzer's work on flowering control and photoperiodic responses; William Klein's laboratory, Klein and Bernard Goldberg's work, and international measuring stations; Shropshire and Cornelius W. Raven's work on dose response curve, collaborative work in the laboratory, research on Hurricane Agnes, and researchers at RBL; activity at RBL, foundation of research in determining energy flow through biological systems, the relation of carbon dating to energy flow, and advances from Secretary Abbot's initial purpose for RBL; lack of understanding and research in the area of molecular biology; increase in environmental research, grants for environmental research, Correll's relationship with the Environmental Protection Agency, CBCES, pollution debates, the press and controversial research, and Correll's role in funding for CBCES; Shropshire's administrative role in

dealing with the press, Secretary Ripley's support, Thompson Committee hearings on Smithsonian funds, and the public's interest in the Smithsonian's funds; Edgewater estuary, employees at CBCES in Edgewater, Maryland, merging CBCES and RBL to form SERC, Shropshire's administrative duties, and controversy over management positions; and Klein's role in developing the Edgewater facility, educational developments at Edgewater, and the Charles Mathias Building, c. 1970s-1980s.

Interviews Transcript, pp. 438-478, of audiotape recording, 1 hour.

Interviews Audio Recordings of Interviews: Total recording time: 1 hour

- Note:
- Original Masters: 2 7" reel-to-reel tapes
 - Preservation Masters: 2 digital .wav files
 - Reference Copies: 1 audiotape cassette, 2 digital .mp3 files

Interviews **Interview 13: September 25, 2000**

Interviews Covers Shropshire's reminiscences of the closing of the SERC Rockville facility, including: establishing SERC in 1983 out of RBL and CBCES, planning to move RBL to Edgewater, developing a name for the research facility, and estimating the cost of building of a new laboratory; administrative discussions about the future of scientific research at the Smithsonian, meetings with RBL, Natural History Museum and National Zoological Park administrators, push for research in molecular biology, and David Correll's administrative ambitions at SERC; tensions between Parklawn and Edgewater staff, shifting trends in research at Edgewater, RBL employees search for new jobs, and Shropshire's sabbatical in Zurich, Switzerland; Secretary Robert McC. Adams' decision to close RBL, Correll's promotion to assistant director at SERC Edgewater, and Shropshire's decision to leave the Smithsonian Institution; Three Mile Island incident, Smithsonian administrators review of RBL (SERC Rockville)'s research; William Klein's loss of administrative influence, budgetary concerns, closing of the laboratory, finding employees new positions, and employees' movement to universities and various foundations or agencies; Maurice Margulies issues with Klein and retirement, Reduction in Force (RIF) options for employees, Shropshire's offer to stay on as acting director, Shropshire's decision to opt for early-out retirement; stress of closing down the laboratory, Klein's struggle with the closing, cleaning out the laboratory, saving records, and giving away equipment; difficulty of finding research positions within the Smithsonian, employees working for the National Institutes of Health, SERC getting rid of books from RBL, and the rapid pace of the laboratory's closing; Shropshire's work as a pastor, attending Wesley Theological Seminary for a Master of Divinity degree, work at Cabin John United Methodist Church, and the stress of starting over; tax problems with the early-out retirement option; issues surrounding the RIF process, limitations on transfers within the Smithsonian, and emeritus position in the National Museum of Natural History's Botany Department; maintaining ties to the American Society of Plant Physiologists, Mark Cathey and the National Arboretum, and maintaining relationships with RBL employees; Christmas parties at the Parklawn facility and issues

over Smithsonian funds for entertaining; and Klein's character, sayings, and habits, c. 1980s.

Interviews Transcript, pp. 479-517, of audiotape recording, 1 hour.

Interviews Audio Recordings of Interviews: Total recording time: 1 hour

- Note:
- Original Masters: 2 7" reel-to-reel tapes
 - Preservation Masters: 2 digital .wav files
 - Reference Copies: 1 audiotape cassette, 2 digital .mp3 files

Interviews **Interview 14: October 23, 2000**

Interviews Covers Shropshire's ministerial career, including: Shropshire's religious experience as a young boy, combining a scientific and religious career; decision to pursue science first, Methodist church correspondence course work, applying for a license to preach in 1960, five-year study at Wesley Theological Seminary, and ordination; beginning preaching career full time, returning to school to complete a Master of Divinity degree, ministerial work at Cabin John Methodist Church, and religion class at George Washington University as an undergraduate; first appointment at Lovely Lane United Methodist Church, working with the community of Baltimore, Maryland, and Amana Mission; move to Foundry United Methodist Church in Washington, D.C., issues with supervising senior pastor Edward W. Bauman, and work with the new senior pastor J. Phillip Wogaman helping the congregation deal with the issues of the senior pastor; location of Foundry, combining science with religion at Foundry, work as an adjunct professor at Wesley Seminary, bivocational ministry, education standards for a Master's of Divinity; Foundry's small group work, Foundry's political members, serving as pastor for President William Jefferson Clinton, Secretary of State Hillary Rodham Clinton and Chelsea Clinton, and Secret Service issues at the parish; Rev. Phil Wogaman's interest in politics and religion, impeachment proceedings of President Clinton, and President Clinton's interest in Shropshire's sermon on the Big Bang; pressure of preaching to a politically powerful congregation, congregation members George S. McGovern and Robert and Elizabeth Dole; Shropshire's relationship with the Clintons and spiritual guidance of the first family; maintaining connections between science and religion, and attending seminars and classes to discuss his personal experiences working with great scientists; how religion affected Shropshire's thoughts on making ethical decision about the use of scientific information; creativity of scientific research, effect of pastoral skills on Shropshire's management style, and counseling employees at Radiation Biology Laboratory; Shropshire's wife, Audrey Marie McConkey Shropshire, and her role as a pastor's wife, balancing work, research and family obligations, and appeal of retirement to spend more time with grandchildren; differences between teaching science at George Washington University and at Wesley Seminary, demands of teaching student pastors, and counseling student pastors; structure of the science and religion class at Wesley Seminary, and teaching experiences; connection between music and science; contribution as a pastor, work in the healing service, lines where science and religion intersect in his pastoral

work, using management experiences; and the state of American education system, c. 1960s-2000.

Interviews Transcript, pp. 518-555, of audiotape recording, 1 hour.

Interviews Audio Recordings of Interviews: Total recording time: 1 hour

- Note:
- Original Masters: 2 7" reel-to-reel tapes
 - Preservation Masters: 2 digital .wav files
 - Reference Copies: 1 audiotape cassette, 2 digital .mp3 files

Interviews **Interview 15: November 20, 2000**

Interviews Focuses on descriptions of photographs relating to the Smithsonian Institution, including: SAO at Table Mountain, California; Smithsonian Institution Castle basement laboratory facilities, laboratory employees and equipment; Smithsonian Institution Castle tower facilities, Secretary Abbot's office; scientific equipment and experiments in the Smithsonian Institution Castle basement, glass-blowing shop, and monochromator; experiments conducted in the South Yard of the Smithsonian Castle, solar measurement experiments; reminiscences of Secretary Abbot; Shropshire's *Phycomyces* experiments, sporangiophores; construction of L'Enfant Plaza and the area surrounding the Smithsonian Castle; reminiscences of William Klein; use of pyranometer and pyrhelimeter; Abbot's secretary, Abbot's African expeditions; Alice P. Withrow; *Avena* coleoptiles, action spectrum images, Robert Withrow, photography, and avoidance response exposures; International Solar Energy Society Conference in Atlanta; sporangiophore hunting; Dave Dennison's photographs; John B. Wolff and a Warburg manometer; building the greenhouse at RBL's Parklawn facility; carbon dating laboratory equipment; construction of RBL's Parklawn facility; Dave Dennison and his photogeotropic equilibrium measuring instrument; Douglas and Rebecca Gettens Hayes; Parklawn facility laboratory floor plans, inside view of the South Yard greenhouse; *Phycomyces* sporangiophore; hydraulic lift at the Parklawn facility; James Matthew McCullough, Gilbert "Gil" Gude, Congressional Research Service; Shropshire working in the laboratory with John D. Azzara; employees at RBL; scientific images of light growth responses; and the machine shop in the Smithsonian Institution Building, c. 1900s-1980s.

[Digital Content: Radiation Biology Lab in Rockville, Maryland, c. 1975. \(Image no. SIA2011-0513\)](#)

[Digital Content: Solar shed in the South Yard behind the Smithsonian Institution Building or "Castle," c. 1950. This shed housed solar collectors for Secretary Charles G. Abbot's scientific research. \(Image no. SIA2011-1493\)](#)

Interviews Transcript, pp. 556-623, of audiotape recording, 1.5 hours.

Interviews Audio Recordings of Interviews: Total recording time: 1.5 hours

- Note:
- Original Masters: 3 7" reel-to-reel tapes
 - Preservation Masters: 3 digital .wav files

- Reference Copies: 2 audiotape cassettes, 3 digital .mp3 files

Interviews

Interview 16: December 15, 2000

Interviews

Continues description of photographs relating to the Smithsonian Institution, including: Robert Bruce Withrow's monochromator's structure and usage; cytogeneticist Chao Carl Moh, Leitz microscope; James M. "Slim" Honaker and Secretary Ripley; Eppley Laboratories' radiometers; Secretary Abbot, sun constant fluctuations, weather measurements; Dave Dennison's image documenting phototropic response, image of *Phycomyces* sporangiophore; *Phycomyces* exposures equipment; image of *Phycomyces* avoidance response, image of *Phycomyces* helix, photography techniques, Dave Dennison's image of *Phycomyces* hunting, circumnutation response; Lois Edgar's image of *Phycomyces* phototropic response, *Phycomyces* setup and power supply equipment; *Phycomyces* sporangiophores, *Arabidopsis thaliana*, genome sequencing; *Phycomyces* sporangiophores' light responses, sporangiophore forest, sporangiophore experiments, advances in scientific experimentation, microbots and microchips; problems with scientific research, the evolution of Shropshire's research; *Phycomyces* sporangiophores' response to high intensity light; the usage of pyranometers; images of Shropshire; Robert Withrow's small monochromator, solar radiation equipment on the Smithsonian Building's North Tower, Smithsonian Building; spectrophotometer prototype equipment used for research, procedures for sporangiophore experimentation; Shropshire's research conducted in Switzerland, images and procedures for transmission electromicroscopy, images of mitochondria and vacuoles; Dave Dennison's helix image and tropostat instrument designed by Dennison; double avoidance response experimentation, ratiospect instrument and its uses; Victor B. Elstad and William H. Klein's experimental work; sporangiophore weight experiment; Secretary Alexander Wetmore, Robert Bruce Withrow, and Darnell G. "Buddy" Talbert; Don Widmayer's growth chambers, spectral distribution for photoperiodism experimentation; William O. Smith's experimentation with Sandoz Pharmaceuticals Corporation chemicals and corn, Merten Jabben and Gerald Deitzer's experimentation with Sandoz chemicals; Shropshire's scientific experiments as a young boy, influence of Lise Meitner; and the RBL Christmas party in the Smithsonian Building, and the staff, c. 1900s-1980s.

[Digital Content: Victor B. Elstad and William H. Klein cutting the hypocotyl hook out of each bean seedling and placing hypocotyl hooks in the Petri dishes that can be seen in the center, c. 1961. \(Image no. SIA2011-0541\)](#)

Interviews

Transcript, pp. 624-684, of audiotape recording, 1.5 hours.

Interviews

Audio Recordings of Interviews: Total recording time: 1.5 hours

Note:

- Original Masters: 3 7" reel-to-reel tapes
- Preservation Masters: 3 digital .wav files
- Reference Copies: 2 audiotape cassettes, 3 digital .mp3 files