Register to the Papers of
Richard L. Hay

Lorain Wang
July 2009

National Anthropological Archives
Smithsonian Institution
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Biographical Note

Richard LeRoy Hay was a geologist, known for his contributions to sedimentary petrography and archaeological geology. He worked closely with Mary Leakey for more than 30 years and provided the geological framework for Olduvai Gorge and Laetoli in Tanzania.

Hay was born on April 29, 1926 in Goshen, Indiana. He attended Ursinus College briefly (1944-45) before transferring to Northwestern University, where he received his B.S. (1946) and M.S. (1948) in geology. In 1952, he earned his Ph.D. in geology from Princeton University and served in the U.S. Army Corps of Engineers (1952-54).

After leaving the army, Hay worked as a geologist for the U.S. Geological Survey (1954-1955) and in 1955 began his academic career at Louisiana State University, Baton Rouge. In 1957 he accepted a position at University of California, Berkeley and remained there until his retirement in 1983. From 1983 to 1997, Hay was the Ralph E. Grim Professor of Geology at University of Illinois, Urbana Champaign, and later had an appointment as adjunct professor at the University of Arizona, Tucson (1998-2006).

Hay made his first trip to Olduvai Gorge in 1962 and continued to research and publish numerous articles on Olduvai for the next four decades. His most significant publication was his monograph, Geology of the Olduvai Gorge (1976), in which he provided a detailed study of the geologic history of Olduvai, placing hominid remains and other archaeological findings at the site in a paleogeographic context. Also significant was his geological analysis of tuff at Laetoli bearing early hominid footprints; he coauthored with Mary Leakey “Pliocene Footprints in the Laetolil Beds at Laetoli, Northern Tanzania” (1979) and “The Fossil Footprints of Laetoli” (1982).

In addition to Olduvai Gorge and Laetoli, Hay conducted geological fieldwork at Oldoinyo Lengai, Ngorongoro caldera, and Kerimasi volcano in Tanzania, as well as Rusinga Island, Lake Magadi, Amboseli, and Mount Suswa in Kenya. He also worked at several sites in the United States, including the John Day region of Oregon, the Green River formation in Wyoming, Amargosa Desert in Nevada, and Searles Lake in California. Additionally, he worked in west-central Wisconsin where he discovered the replacement of uppermost Precambrian and Cambrian-Ordovician rocks by low-temperature potassium-feldspar.

During his lifetime, Hay received many honors for his accomplishments in geology. He was a Fellow of the Geological Society of America, American Association for the Advancement of Science, and California Academy of Sciences. He was awarded the Geological Society of America’s Kirk Bryan Award in 1978 and the Rip Rapp Archeological Geology Award in 2000. In 2001, he received the Leakey Foundation’s Leakey Prize in 2001. Posthumously, a memorial was held for Hay at the GSA annual meeting in 2007.

Hay passed away at the age of 79 on February 10, 2006.
Sources Consulted


## Chronology

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1926</td>
<td>Born April 29 in Goshen, Indiana</td>
</tr>
<tr>
<td>1946</td>
<td>Earns B.S. in geology from Northwestern University</td>
</tr>
<tr>
<td>1948</td>
<td>Earns M.S. in geology from Northwestern University</td>
</tr>
<tr>
<td>1952</td>
<td>Earns Ph.D. in geology from Princeton University</td>
</tr>
<tr>
<td>1952-1954</td>
<td>Serves in U.S. Army Corps of Engineers</td>
</tr>
<tr>
<td>1954-1955</td>
<td>Geologist for the U.S. Geological Survey</td>
</tr>
<tr>
<td>1955-1957</td>
<td>Assistant Professor at Louisiana State University, Baton Rouge</td>
</tr>
<tr>
<td>1958-1983</td>
<td>Professor at University of California, Berkeley</td>
</tr>
<tr>
<td>1962</td>
<td>First visit to Olduvai Gorge in Tanzania</td>
</tr>
<tr>
<td>1978</td>
<td>Awarded Kirk Bryan Award by Geological Society of America</td>
</tr>
<tr>
<td>1983-1997</td>
<td>Ralph E. Grim Professor of Geology, University of Illinois, Urbana-Champaign</td>
</tr>
<tr>
<td>1998-2006</td>
<td>Adjunct Professor at University of Arizona, Tucson</td>
</tr>
<tr>
<td>2000</td>
<td>Awarded Rip Rapp Archeological Geology Award by Geological Society of America</td>
</tr>
<tr>
<td>2001</td>
<td>Awarded Leakey Prize by the Leakey Foundation</td>
</tr>
<tr>
<td>2006</td>
<td>Passes away at the age of 79 on February 10.</td>
</tr>
</tbody>
</table>
Selected Bibliography


**Scope and Content Note**

This collection comprises the professional papers of Richard LeRoy Hay. Among his papers are his correspondence with Mary D. and Louis S. B. Leakey and his research at Olduvai Gorge and Laetoli, consisting of his field notebooks, maps, photographs, data, and documentation of geological specimens he collected. Also in the collection is his research at other sites in East Africa, including Kerimasi and Oldoinyo Lengai in Tanzania and Rusinga Island in Kenya. To a lesser extent (although still a significant amount) in the collection is the documentation of Hay’s research in the United States. Present are field notebooks and photographs from his research in Amargosa, Nevada which served as a geologic analog for Olduvai. Also in the collection are field notebooks spanning from 1958 to 2004 containing his notes on his research in Oregon; Hawaii; Wyoming; California; New Mexico; Colorado; Arizona; Wisconsin; and other regions in the country. Mixed in are notes from his research in other countries including Pakistan, Scotland, and France. Also in the collection are his field notebooks from his service in the U.S. Army Corps of Engineers, during which he spent some time in Japan. There are no notes from his work as a geologist for the U.S. Geological Survey.

**Restriction**

CD-RW containing scans of maps of Angata, Endulen, and Ngorngoro is restricted due to preservation concerns.

**Extent**

12.5 linear feet (13 document boxes, 3 flat boxes, 8 card file boxes, 1 oversized box) plus 1 CD-RW and 1 map folder

**Provenance**

These papers were donated to the National Anthropological Archives in January 2009 by Richard L. Hay’s widow, Lynn Hay.

**Related Collections**

Hay’s collections of thin sections and geological specimens from Olduvai Gorge, Laetoli, Oldoinyo Lengai, and Kerimasi volcano are held by the Smithsonian Institution’s Human Origins Program.

For other materials at the National Anthropological Archives relating to Olduvai and Laetoli, please see the Louise Marie Robbins Papers.
**Processing Note**

The papers of Richard L. Hay were received partially organized. Most of the collection was packed and sent from Hay’s home in Tucson after his death. A small portion of Hay’s Olduvai photos, reprints of his publications, and X-ray diffraction data were sent to the archives later by his colleague Marie Jackson. The processing archivist kept existing groupings and arrangement and organized the collection into nine series. Original folder titles were retained with titles assigned by the archivist placed within square brackets. Oversized materials were separated and replaced with notes indicating original and new locations.
Series Description and Container List

2 ½ inches

Mostly correspondence with Mary Leakey. Letters are arranged chronologically.

Box 1

[Leakey, Mary D.] 1965-68, undated
[Leakey, Mary D.] 1968-70
[Leakey, Mary D.] 1988-96
[Leakey, Louis S. B.] 1961-70

Series 2. East Africa Research. 1962-2002
3 linear feet, 1 map folder

Hay’s fieldwork in Olduvai Gorge and Laetoli in Tanzania and other sites in East Africa spanned from 1962 to 2002. This series contains field journals, diagrams of stratigraphic sections, notes, data, photographs, and maps relating to his research in East Africa, which also include Oldoinyo Lengai, Ngorongoro caldera, and Kerimasi volcano in Tanzania as well as Rusinga Island, Lake Magadi, Amboseli, and Mount Suswa in Kenya. Absent from the collection are notes for his fieldwork in 1984, 1986-1988, 1990-1993, 1996, and 1997. Additional materials in this series are a curriculum vitae that he submitted for a grant to fund Olduvai research and reprints on Olduvai that he collected or were sent to him by the authors. Subseries: Oldoinyo Lengai (carbonatites), an original grouping and name assigned by Hay, contains materials on both Lengai and Kerimasi and reprints on carbonatites.

Please see Series 4. Sample Descriptions for descriptions of geological specimens collected from Olduvai and Laetoli. See also Series 1. Correspondence, Series 5. Specimen Sample List, Series 6. Publications, and Series 7. Photographs for more materials relating to Olduvai and his other research in East Africa. Series 3. Non-East Africa Research may also be of interest as it contains Hay’s Amargosa research, which served as an analog to Olduvai Gorge.

Subseries: Field notebooks
Subseries: Stratigraphic Sections
Subseries: Olduvai
Subseries: Laetoli
Subseries: Rusinga
Subseries: Oldoinyo Lengai (carbonatites)
Subseries: Maps

Box 2

Subseries: Field notebooks

62 - I thru 6/25             June 7-June 25
62 - II 6/26 - 7/16
62 - III 7/17 - 8/6
1964 I             June 11-July 4
1964 [II]             July 5-July 22
Natron Area             July 25-August 4
1964 Soughou, Kariandusi, Nivaska, Akisim, and Calico Mountains
                        August 8-December 16
1967             June 28-August 13

Box 3

1968             June 20-August 13
Includes Sicily
1969 - I thru 6/30             June 15-30
"Olduvai 1969 I"
69 - II 7/1 on             July 1-23
"Olduvai 1969 II"
70 I thru 6/18             May 17-June 18
70 - II 6/19 on             June 19-July 8
1972

Box 4

72 I             June 16-July 18
72 II             July 2-July 23
"Olduvai II"
1973             September 5-25
1973-74             December 25-January 11
1975             June 30-August 3
1976             July 3-November 18
1978             July 1-28
1979             August 14-31
1981             July 16-31
1982             July 16-August 20
1983             July 8-August 14
Rusinga 85             March 17-April 13

Box 5

Series 2. East Africa Research
1989 | July 21-August 7
94-95 | 1993 August 14, 1995 July 16-23
98-99 | 1999 July 3-August 6
2000 | July 15-August 6
2001 | July 1-August 7
2002 | July 6-July 30

Swahili

*English-Swahili translations of phrases and words*

Subseries: Stratigraphic Sections

[Stratigraphic sections of Olduvai and Laetoli]

**Oversize Box**

Sections 1 thru 8 (N side of gorge, mouth thru CK)
Sects 9-14 (3rd F – Camp area, N side)
Loc 15 thru 25a
Sects 26 to 32 (Balbal, S. of Gorge; mouth to ELK on S. Side)
Sects 32a – 45 (W. of 3rd F.S. side, to FLK, VEK)
Sects 47-66 (M. Gorge, S. side, to W. of FLK)
Sects 67-84 (N side M. Gorge to W. FK)
[Unidentified sections]
[Unidentified sections]
[Unidentified sections]

Subseries: Olduvai

**Box 5 (continued)**

XRD Clay Mineralogy Olduvai ‘89
Clay Mineralogy XRD - Olduvai Loc 80, Sikes’ Series
Clay Mineralogy XRD - Olduvai 95 (bulk) also 30%
KF, 70%, Mg - smectek [?]
Clay Mineralogy XRD - Olduvai 1995 + ‘93
(oriented)
ISGS Cores
Clay Mineralogy XRD (1962-64) - Olduvai Pre-89
Clay Mineralogy XRD - Olduvai ‘69
XRD Clay Mineralogy - Olduvai 72-74
XRD Clay Mineralogy - Olduvai 1996 - 060
Olduvai 96 work

Box 6

XRD 2001
Illustrations for Presort [?]

Olduvai and Ngorongoro

Curriculum vitae and letter

1988, undated

Curriculum vitae for Olduvai-related research

Proposal plus a letter from Robert J. Blumenschine

Inviting Hay to act as geological consultant for the

Olduvai Archaeological Project

[Curriculum vitae for Olduvai-related research]

1988, undated

Materials separated from Olduvai reprints: 2004

Final report for "Revised stratigraphy: geochemical

Fingerprinting, paleomagnetism and 40Ar/39Ar

dating, Olduvai Gorge, Tanzania"; e-mail

Regarding Olduvai faunal evidence for Serengeti

Chapter; figures and tables; page from article; and

Notes

Geological Survey of Tanganyika Report RP/23: A

Contribution to the Geology of the Olduvai Gorge

By R. Pickering

Olduvai Reprints [1 of 2]

Olduvai Reprints [2 of 2]

Subseries: Laetoli

Laetoli 1982 -- Footprint Tuff data

First Draft - Leakey & Hay – Laetoli

Includes 35mm slides

Laetoli - Lith. Photos & gen. [?]

Photos

1978

Laetoli 1982 -- Laetolil Photography FPT [1 of 2]

Photos of Laetolil footprints and Olduvai

1982

Laetoli 1982 -- Laetolil Photography FPT [1 of 2]

1982

Box 7

Subseries: Rusinga

[Articles on Rusinga]

Rusinga [charts]

93-95 [Rusinga]

Rusinga [air photos]
See Box 21
Rusinga -- Mfangano Air Photos for Dr. Alan Walker
(55 photos)
See Box 21

Subseries: Oldoinyo Lengai (carbonatites)

Keramasi + Lengai Slides
Keramasi + Lengai photos
Lengai Figs.
   Photographs
Carbonatite Photomicro.
   Photographs
Carbonatite
   “Lengai - new isotope data”
Carbonatite Reprints [1 of 3]

Box 8

Carbonatite Reprints [2 of 3]
Carbonatite Reprints [3 of 3]

Subseries: Maps

[Ngoringoro Conservation Area map]
Geological Survey of Tanganyika. Angata Salei - Quarter Degree sheet 39
See Map Drawer; 1961 edition, uncorrected
Olduvai Geologic Map + LSL Section at MK
See also Map Drawer
Tanzania Geological Maps - Angata, Endulen, Ngorongoro

Series 3. Non-East Africa Research. 1953-2004
10 inches

This series mostly contains field notebooks from Hay’s research in the United States, with some notes mixed in from his research in other countries including Pakistan, Scotland, and

Series 2. East Africa Research
Series 3. Non-East Africa Research
France. At the beginning of the series are field notebooks and photographs from his Amargosa research, which served as an analog to Olduvai Gorge. The notebooks in the rest of the series are arranged in chronological order and cover his research in Oregon; Hawaii; Wyoming; California; New Mexico; Colorado; Arizona; Wisconsin; and other regions in the country. Also in the collection are his 1953 to 1954 field notes while stationed in Japan as a member of the U.S. Army Corps of Engineers. Only select sites covered in each notebook are listed below.

A few of the field notebooks in *Series 2. East Africa Research* contain some notes from Hay’s research outside of East Africa. Please also see *Series 7. Photographs*.

**Box 9**

1979 Amargosa  
80-81 Amargosa II  
82-84 III Amargosa  
Amargosa 84  
Amargosa [prints]  
Armagosa Slides [1 of 2]  
Armagosa Slides [2 of 2]  
[1953]  
*Japan*  
[1953-54]  
*Japan*

**Box 10**

[1954]  
*Japan*  
1958  
*Clarno Study*  
1959  
*Oregon - Crater Lake, Ochoco, John Day Fossil Beds*  
Misc. ‘59-71  
*California*  
1960  
*John Day area*  
1961  
*John Day area*  
1965 II  
*Oahu - Koko Crater, Rabbit Island, Tantalus, Salt Lake, Pearl Harbor; Green River (Utah?), Columbine, Colorado*  
1972-77  
*Point Reyes Beach, Sarna, Oahu, California*
1977       June 26-December 31

Southwest
1978-79, -80
California, New Mexico, Utah
81, 82, 83
France, California
1987 & 88
Hawaii, CA, Grand Canyon
89-91
Tri-state, Mo, Wisconsin, Pakistan, Scotland
2002-2004
Tahiti, Colorado Plateau, Tucson, Chile, Argentina

Series 4. Sample Descriptions
5 linear feet

Descriptions on file cards of geological samples collected from Olduvai Gorge and Laetoli.

Box 11
Olduvai Gorge Beds I - III

Box 12
Olduvai Gorge II, III-IV & Natron

Box 13
Olduvai Beds III-IV Masek, Ndutu; Stones

Box 14
Olduvai (47B)

Box 15
Olduvai & Carbonatite

Box 16
Olduvai Ns. 1972 Calcrete, L. Ndutu
Box 17

Laetoli & Carbonatites


5 inches

Lists of Hay’s collections of geological specimens from various sites around the world, including Olduvai.

Box 18

Specimen List - Summer 1962
Specimen List - Summer 1964
1967 Spec. List (also MDL 64, 65, 66, 67)  
   Also includes Hawaii, 1959
Specimen List 1968 + MDL 1969
Specimen List 1969 + MDL 70
Olduvai - Sample data -- 1969-1970 Sample list
   Includes samples from 1962
Specimen List 1970[-72]
Specimen List 1972
Specimen List 1973
Samples 73-74
75 Clear Cr. - Spec. List 1975
Specimen List 1976
Specimen List - 1977
Specimen List 1978
Specimen List - 1979 - I (North Amargosa, March & Oct)
Specimen List - 1979 - II
Spec. List 1980
1981 Spec. List
Specimen List 1982
1983 Samples & Cp [?]
1984 Samples
   Includes samples from 1989
1985 Samples
1986
1987
1988
1989 Samples
1990 Specs List
1991
Liu Specs, May 92
1992, Also 93 for Mo trip
1993 & 4
1995
1996
1997 Samples
98 - Collecting
98 - VI/AZ Collections
G.R. Fm KF
Laetoli - Boxed Spec.
Boxed Samples, UC --> UI
Packing & Organization

5 inches

Reprints of articles by Hay and a copy of his monograph *Geology of the Olduvai Gorge* (1976). Also in this series is the “Medals and Awards” section of the *Geological Society of America Bulletin* for 1978, which includes Hay’s acceptance speech for the Kirk Bryan Award. The publications are unarranged.

Box 19

[List of Publications]
[Reprints, 1 of 3]

<table>
<thead>
<tr>
<th>Title</th>
<th>Year</th>
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<tbody>
<tr>
<td>The Judicious Selection and Preservation of Tuff and Travertine Building Stone in Ancient Rome</td>
<td>2004</td>
</tr>
<tr>
<td>Chemical Sedimentology and Paleoenvironmental History of Lake Olduvai, a Pliocene Lake in Northern Tanzania</td>
<td>2001</td>
</tr>
<tr>
<td>Origin and Diagenesis of Lacustrine Sediments, Upper Oligocene Creede Formation, Southwestern Colorado</td>
<td>1999</td>
</tr>
<tr>
<td>Clay Mineral Diagenesis in Core KM-3 of Searles Lake, California</td>
<td>1991</td>
</tr>
<tr>
<td>Stratigraphy and Lake-margin Paleoenvironments of Lowermost Bed II in Olduvai Gorge</td>
<td>1996</td>
</tr>
<tr>
<td>Spheroids at the Cretaceous-Tertiary Boundary are Altered Impact Droplets of Basaltic Composition</td>
<td>1983</td>
</tr>
<tr>
<td>18O/16O Ratios in Cherts Associated with the Saline Lake Deposits of East Africa</td>
<td>1973</td>
</tr>
<tr>
<td>Zeolites in Sedimentary Rocks</td>
<td></td>
</tr>
</tbody>
</table>
Potassic Alteration in the St. Francois Mountains of Missouri 1993
Investigation of Al, Si Order in K-feldspars using 27Al and 29Si MAS NMR 1995
Laser-fusion 40Ar/39Ar dating of Bed I, Olduvai Gorge, Tanzania 1991
Field Trip #2 Precambrian-Cambrian Boundary in West-Central Wisconsin 1991
Sources of the Quartzite of Some Ancient Egyptian Sculptures 1988
Diagenetic Alteration of Silicic Ash in Searles Lake, California 1987
Sepiolite in the Amboseli Basin of Kenya: A New Interpretation 1984
Natrocarbonattite Tephra of Kerimasi Volcano, Tanzania 1983
Carbonatite Tuffs in the Laetoli Beds of Tanzania and the Kaisersuhl in Germany 1983
The Fossil Footprints of Laetoli 1982
Role of Tephra in the Preservation of Fossils in Cenozoic Deposits of East Africa 1986
Pliocene Footprints in the Laetolil Beds at Laetoli, Northern Tanzania 1979
Chronological Position of the Fossil Hominids of Tanzania 1982
Formation of the Crystal-Rich Glowing Avalanche Deposits of St. Vincent, B.W.I. 1959
Paleoenvironment of the Laetolil Beds, Northern Tanzania 1981
Zeolitic Weathering of Tuffs in Olduvai Gorge, Tanzania 1980
The KBS Tuff Controversy May be Ended 1980
Pellets, Ooids, Sepiolite and Silica in Three Calcretes of the Southwestern United States 1980
[Encyclopedia entry for Olduvai Gorge] 1979
Globule Ignimbrite of Mount Suswa, Kenya 1979
Medals and Awards for 1978 1978
Environmental Setting of Hominid Activities in Bed I, Olduvai Gorge 1979
Volcanic Ash - Diagenesis 1978
Melilitite-Carbonatite Tuffs in the Laetolil Beds of Tanzania 1978
Calcretes of Olduvai Gorge and Ndolanya Beds of northern Tanzania 1978
Isotopic evidence for dramatic climatic changes in East Africa during the Pleistocene 1978

Series 6. Publications
Fossil hominids from the Laetolil Beds 1976
The Olduvai Event at Olduvai Gorge 1976
The MNK Chert Factory Site, Olduvai Gorge, Tanzania 1974
Lithofacies and Environments of Bed I, Olduvai Gorge, Tanzania 1973
Weathering of Basaltic Tephra on the Island of Hawaii 1972
Stratigraphy, archaeology, and age of the Ndutu and Naisiusiu Beds, Olduvai Gorge, Tanzania 1972
Geologic Background of Beds I and II Stratigraphic Summary 1971
The Northern Colossus of Memnon: New Slants 1984
Preliminary notes on the Stratigraphy of Beds I-IV, Olduvai Gorge, Tanganyika 1964
Evernden and Curtis: Potassium-Argon Dating 1965
Stratigraphy of Beds I through IV, Olduvai Gorge, Tanganyika 1963
Authigenic Silicate Minerals in Searles Lake, California 1963
Environment and Archeology 1966
Geomagnetic Polarity Epochs: New Data from Olduvai Gorge, Tanganyika 1967
Stratigraphic and Paleoclimatic Interpretation of Beds I through IV in Olduvai Gorge 1967
Tuff lava 1967
Hominid-Bearing Deposits of Olduvai Gorge 1967
[Reprints, 3 of 3]
Revised Stratigraphy of Olduvai Gorge 1967
Petrology of Palagonite Tuffs of Koko Craters, Oahu, Hawaii 1968
Chert and Its Sodium-Silicate Precursors in Sodium-Carbonate Lakes of East Africa 1968
Makatite, A New Hydrous Sodium Silicate Mineral from Lake Magadi, Kenya 1970
Geomagnetic Polarity Epochs: Age and Duration of the Olduvai Normal Polarity Event 1971
Paleomagnetism and Potassium-Argon Ages of Volcanic Rocks of Ngorongoro Caldera, Tanzania 1970
Zeolites and Zeolitic Reactions in Sedimentary Rocks 1966
Phillipsite of Saline Lakes and Soils 1964
Zeolitic Weathering in Olduvai Gorge, Tanganyika 1963
Olduvai Gorge: A case history in the interpretation of hominin paleoenvironments in East Africa 1990
New Developments in the Geology of Natural Zeolites 1993
Sedimentation Patterns in a Plio-Pleistocene Volcaniclastic
Rift-Platform Basin, Olduvai Gorge, Tanzania 2002
Late Pliocene Homo and Hominid Land Use from Western
Olduvai Gorge, Tanzania 2003
Dating the Naisiusiu Beds, Olduvai Gorge, by electron spin
resonance 2003
Silicate Reactions in three Lithofacies of a Semi-Arid Basin,
Olduvai Gorge, Tanzania 1970
An Isotopic Study of Paleosol Carbonates from Olduvai Gorge 1986
Geology of the Olduvai Gorge: A Study of Sedimentation in a
Semiarid Basin 1976

2 linear feet

This series is mostly comprised of photos of rock samples and aerial and site photos of
Olduvai, Laetoli, and surrounding areas. Folders with alphanumerical titles in boxes 21
through 23 refer to site numbers in that region and contain aerial photos. Also in this
series are photos of Panamint Springs, a crater in Panama, and unidentified rock samples.

More photos can be found in Series 2. East Africa Research and Series 3. Non-East
Africa Research.

Box 20

Misc. Photos

Panamint Springs, Panama Crater, and
unidentified rock samples

[Scrapbook photos] Circa 1960s

See Oversize Box: field photos of East Africa,
Sicily, and Syracuse; also Life magazine article on
Richard Leakey, “On safari with a man called
ostrich.”

[Olduvai photos with cropping marks, 1 of 2]
[Olduvai photos with cropping marks, 2 of 2]
Has 2d fault
[Olduvai transparencies, 1 of 3]
[Olduvai transparencies, 2 of 3]
[Olduvai transparencies, 3 of 3]
1995 (Olduvai), 1972 (old), 1995 (SPA)
Olduvai - Photos
E. Af. Chert Photos
Concretures etc. -- Olduvai 1999
Olduvai & Self

*Only photos of rock samples; no photos of Hay*

[Unidentified aerial photos]

**See Oversize Box**

Laetolil Flight lines & photo nos.
Olduvai Gorge - Field Air Photos, Working Set

**Box 21**

Rusinga [air photos]
Rusinga -- Mfangano Air Photos for Dr. Alan Walker
(55 photos)
[Notes, maps, and aerial photos]
29TN1 1957

**Box 22**

29TN1 1957
29TN2 1957
35TN2 1958
[35TN3] 1958
35TN5 1958
35TN6 1958
35TN8 1958
35TN10, 74-80 L. Ndutu S. toward Eyasie 1958

**Box 23**

35TN11 1958
35TN12 1958
35TN14 1958
35TN15 1958
35TN16 1958
Kerimasi & Vicinity 1957-58
Enlargements 1958

**Series 8. Fieldwork Tools**

6.5 inches

This series contains magnifiers and surveying tools used by Hay in the field.

**Box 24**

[10x Hastings Triplet magnifier]
[Magnifying glasses (Q-O-S COR, New York) in leather pouch]
[Matuzaki Seiki #8020 surveying tool set]