



MG 304 - John King fonds

Accessions 2003-095, 2003-058, 2006-006

Dates: 1970-2003.

Extent: 4.2 m of textual records; 231 photographs: prints, negatives and slides - 6 computer discs.

Biography: John King began studying at King's College, Newcastle, in the Durham University (UK) in 1957 and was awarded the B.Sc. Honours (First Class) degree in Botany in 1960. After earning his PhD in plant physiology at the University of Manitoba, Dr. King joined the faculty of the University of Saskatchewan as an Assistant Professor of Biology in 1967. There for more than 35 years he was named Professor Emeritus upon his retirement in 2003. Dr. King researched a variety of plant cell phenomena, including "membrane transport, somatic cell hybridization, cell genetic transformation and, most notably in the long term, biochemical mutant isolation."¹ He was a pioneer in the exploration of the genetic basis of physiological and metabolic processes using biochemical mutants of plant cells and of whole plants. His work has received international recognition and has included research to develop techniques of gene transfer for use in economically important plants, the study of the effect of specific herbicides on plant amino acid metabolism, and the isolation of mutant herbicide-tolerant plants. In addition to his research John King served as the Group Chair for Life Sciences within the Natural Sciences and Engineering Research Council (NSERC), as president of the Canadian Society of Plant Physiologists (CSPP) for 1983-1984, and as associate editor of the Canadian Journal of Botany. He wrote two books The Genetic Basis of Plant Physiological Processes (1991) and Reaching for the Sun (1997) and numerous articles. The Canadian Society of Plant Physiologists (CSPP) awarded him the society's 2001 Gold Medal in recognition of his contributions to the field of plant physiology.

Scope and content: This fonds consists of records relating to John King's career as a plant physiologist. The materials include research that he conducted and directed, supervised work of MSc students and Post-Doctoral Fellows, biology lectures, notes, drafts and correspondence relating to his two books The Genetic Basis of Plant Physiological Processes and Reaching for the Sun. There are also copies of articles he authored and a reference collection of articles and indices to articles for research purposes.

Records donated to the University of Saskatchewan Archives by John King on May 21, 2003 (acc. 2003-058) and August 13, 2003 (acc. 2003-095).

Arrangement: This fonds is arranged into the following series:

1. King, John (2002) Recollections and reflections of a plant physiologist. Trends in Plant Science, Vol. 7, No. 6 pp 235-282.

I. Research

A. Experiments - Binders

B. Other experiments

C. Cultures

D. Media

E. M.Sc. Students and Post-Doctoral Fellows Research

F. Sabbatical Work

II. Lectures

III. Writings

IV. Reference Materials

Restrictions: There are no restrictions.

Further accruals are expected.

Edited for formatting by Amy Putnam, 2018.

SERIES AND FILE LISTING

I. RESEARCH - 1970- 2001 - 1.87 m of textual records - 177 photographs

This series consists of research conducted and directed by John King. It includes the following sub-series: Experiment binders; Other experiments; Cultures; Media; MSc Student and Post doctoral Fellows Research; and Sabbatical work.

A. Experiments - Binders - 1979-1996.

1. [Index to Experiments 001-565, May 22, 1979 to June 7, 1986]
- experiments in binders 1 to 9.
2. Experiments 0 to 172, Binder 1 - 1979-1981 - 3 folders
3. Experiments 173 to 225, Binder 2 - 1981-1982 - 3 folders
4. Experiments 226 to 267, Binder 3 - 1982-1983 - 2 folders
5. Experiments 268 to 291, Binder 4 - 1983 - 2 folders
6. Experiments 292 to 331, Binder 5 - 1983-1984 - 2 folders
7. Experiments 332 to 390, Binder 6 - 1984 - 2 folders
8. Experiments 391 to 462, Binder 7 - 1984-1985 - 2 folders
9. Experiments 463 to 522, Binder 8 - 1985 - 3 folders
10. Experiments 523 to 565, Binder 9 - 1985-1986 - 3 folders
11. Experiments 566 to 593, Binder 10 - 1986 - 1 folder
12. Experiments 594 to 633, Binder 11 - 1986-1989 - 2 folders

Box 2

13. Experiments 634 to 678, Binder 12 - 1989-1991 - 3 folders
14. Experiments 679 to 725, Binder 13 - 1991-1992 - 3 folders

Box 3

15. Experiments 726 to 759, Binder 14 - 1992- 1993 - 2 folders
16. Experiments 760 to 802, Binder 15 - 1993 - 2 folders
17. Experiments 803 to 850, Binder 16 - 1994-1996 - 2 folders
18. Experiments 851 to 902, Binder 17 - 1995-1996 - 2 folders

Box 4

B. Other experiments - 1970-1996.

Experiments under King's direction- 6 folders:

1. Methods - [1970-1972]
2. Plant Physiology Book 1, May 6, 1970
3. Plant Physiology Book 2, June 1971-April 1972
4. May 12, 1971 - May 1972
5. Plant Physiology, April 24, 1972 - August 11, 1972
6. NO₃-R and GDH - 1972
7. Life in Space [Experiments] - 1976-1977 - 4 folders

Box 5

8. Experiments on Datura Cell Culture Performance - 1977-1978 - 2 folders
- leading to the isolation of a nitrate reductase-less mutants. Work done by V. Khanna with J. King.
9. Isolation of a Nitrate reductase-less mutant of Datura - [1979]
- published in Plant Physiology in 1980, authors J. King and V. Khanna.
10. Experiments Saskatoon [001 to 042] - 1981-1982
11. Manual and Procedures - [1979-1985]
12. Transformed Plants - 1985
- Nop+, KarR, N. tabacum, N. plumb., Petunia.

13. Experiments Jan. >86 to Jun >87, Elizabeth Hinks - 1986-1987 - 2 folders
14. Growth Performance of Datura - Experiments/Culture/Media - 1987
- Wild type and herbicide resistant cells in the presence of herbicides.
15. DHFR and TS Experiments - 1994-1996 - 2 folders
16. Minor Projects Started 7/[1996]

Box 6

C. Cultures - 1979-1989.

1. Cultures 001 to 4857 [and 4999-5157?] - 1979-1983 - 2 folders
2. Cultures 4858 to 9999, Apr. >82-Jan. 23 >84 - 1982-1984 - 2 folders
3. Cultures 001 to 10,003, January 1984 - Aug. 1986 - 2 folders
4. Cultures 001 to 10,002, Aug. 1986 - July 1989 - 2 folders
5. Cultures 001 to [7890], July 1989 - [July 2001] - 2 folders
6. Cultures - [1981-1982?] - 2 folders
7. Datura Haploid Shoot Culture - 1982-1983

Box 7

D. Media - 1979-2002

1. Media - [May 1979 - Oct. 1982] - 2 folders
2. Media - Oct. 14, 1982 - Dec. 20, 1984 - 2 folders
3. Media - Dec. 21, 1984 - Apr. 7, 1986
4. Media - Apr. 7, 1986 - May 8, 1987
5. Media - May 11, 1987 - Nov. 9, 1989
6. Media - Nov. 9, 1989 - [July 15, 2002] - 2 folders

7. Media [1980-1986]
8. Media Chemical Solutions [1982-1985]
9. Media - Krystina's - [1982-1983]
10. Herbicides/Media - [1980-1985?]

Box 8

E. M.Sc. Student and Post-Doctoral Fellows Research - 1970-1996

-arranged by last name.

1. Jill Bayley, MSc Thesis Experiments - 1970
2. Li Juan Fang, MSc Thesis Experiments, Methods and Culture - 1994-1996 - 3 folders
3. Li Juan Fang, MSc Thesis Research Experiment Notes - 3 folders; 20 photographs
- 6 prints; 14 negatives.
4. Dr. M. Mii, Experiments on Datura Cell Growth performance - [1984]
- re: isolation of chloroplasts and nuclei. Work carried out by a technician.
5. Dr. Mii, Experiments - Aug. >82 - 1983 [includes workbook 1977-1978]
6. Dr. Mii, Notes - Nuclear Isolation, Chromosome Isolation - 1983-1984 - 2 folders
7. George Mourad, Experiments - 1994
- on Threonine dehydratase, from Arabidopsis plants.

Box 9

Arthur Savage:

8. Master's proposal & Furner's proposal
9. Papers Cited in Thesis - 4 folders
10. Auxotrophs with Tissue Culture
11. Auxotrophs Recovered Without Tissue Culture
12. Pollen and Anther Culture

13. Problems and Successes in Selecting Mutant Plant Cells
 - The use of plant tissue culture for mutant isolation, problems and successes.
14. Mutant Experiments
15. Resistance to BUdR and 8AG
16. Somatic Hybridization and Critical Analysis
17. Miscellaneous
18. Irrelevant
19. [Methods]
20. [Research] - 2 folders
21. Photographs
 - 37 slides, 20 prints and 74 negatives
22. Abstracts: Fourth International Congress of Plant Tissue and Cell Culture, Calgary, August 20-25, 1978
 - annotated

Box 10

F. Sabbatical work - 1973-1974, 1980-1981.

1. Sabbatical 1973-1974, University of Leicester, England - 2 folders
2. Sabbatical 1980-1981 - [Cultures]
3. Sabbatical 1980-1981 - [Experiments] - 1 folder - 26 Photographs
 - 6 prints, b&w; 19 negatives, 35 mm, 1 contact sheet

II. LECTURES - [1991-2003].13 m of textual records; 2 computer discs

This series consists of notes and overheads for John King's Biology 835.3 Genetic Approaches to Plant Physiology course, which was based closely on his book The Genetic Basis of Plant Physiological Processes.

1. Biology 835.3 - Lectures - Section 1
2. Biology 835.3 - Lectures - Section 2

3. Biology 835.3 - Lectures - Section 3
4. Biology 835.3 - Lectures - Section 4
5. Biology 835.3 - Lectures - Section 5
6. Biology 835.3 - Lectures - Section 6
7. Biology 853.3 Book Sections 1 to 6 - 2 computer discs
 - These can be read with Microsoft Word for Windows

Box 11

III. WRITINGS - 1965-2003 - .2 m of textual records; 54 photographs; 4 computer discs

This series consists of offprints authored and co-authored by John King; photographs used in his book The Genetic Basis of Plant Physiological Processes (1991), and correspondence, notes and drafts of Reaching for the Sun (1997).

1. J. King Reprints Volume 1, # 1-47 - 2 folders - 1965-1992
 - Includes a list of the articles organized by subject at beginning of file.
2. J. King Reprints Volume 2, #48-85 - 2 folders - 1976-2003
 - Includes a list of the articles organized by subject at beginning of file.
3. The Genetic Basis of Plant Physiological Processes Photographs- 54 Photographs: prints, negs, and a slide

Reaching for the Sun:

4. Correspondence Re: Publication of the English Language Edition - 1994-1997
5. Correspondence re: Editions in Other Languages than English - 1998-2002
6. Book Reviews
7. Correspondence with Public - 1997-2002
8. Re: Publication - 1998-2002
9. Chapter One - Notes
10. Chapter Two

11. Chapter Three - Notes
12. Chapter Four - Notes
13. [Research Notes and Articles] - 4 folders
14. How Plants Work I - IV - 4 computer discs
 - draft of Reaching for the Sun. These can be read with Microsoft Word for Windows.

IV. REFERENCE MATERIALS - 1.4 m of textual records

This series consists of offprints, photocopies of articles, and two different indices to research articles gathered by John King. The articles have been arranged into general alphabetical order by the last name of the first listed author. One index is to research for The Genetic Basis of Plant Physiological Processes. A second index is related to research for John King's 1990's work on whole plant mutants. The articles referred to in the indices are not in the collection.

	<u>Box 12</u>
Collected Articles, A-C	<u>Box 13</u>
Collected Articles, D-G	<u>Box 14</u>
Collected Articles, H-K	<u>Box 15</u>
Collected Articles, L-N	<u>Box 16</u>
Collected Articles, O-S (folder 2)	<u>Box 17</u>
Collected Articles, S (folder 3)-V	<u>Box 18</u>
Collected Articles, W-Z	<u>Box 19</u>
Index cards (by subject then author) to articles for research for <u>The Genetic Basis of Plant Physiological Processes</u> (1991).	

Card Catalogue drawers 47 and 48

Index cards by author to articles related primarily to research with whole plant mutants.
- See index catalogue drawers 47 and 48.

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Box 20

Biology 110.6. - 1996-1999.
Lecture notes.

Research data. - 1973-1976.

Box 21

Biology 331.3. - 1996.
Lecture notes. Introduction to plant physiology.