

TofA #2 Archive FINAL AFNS Professor s Morrison, Newton, Spencer and Hiruki Tributes July 24, 2023
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ABOUT TALES OF ALES (2023):

TALES of ALES: Celebrating the Past, and Changing the Future - Stories about some University of Alberta Plant Science Professors and their activities from the past

The TALES are a series of stories written in retirement by Keith Briggs in 2021 – 2023 as Emeritus Professor of the Department of Agricultural, Food and Nutritional Science (AFNS), Faculty of Agricultural, Life and Environmental Science (ALES) at the University of Alberta. The TALES place into the record some notable agricultural science events and activities for the Archives, stories not previously told or elaborated that may be of interest to the academic, scientific and public communities. They feature Professors or other staff all found in the history of AFNS. The TALES author of record is Keith G. Briggs (AFNS / ALES, on staff 1969-199), with additional authors in some cases.

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ABBREVIATED TITLE:

TALES of ALES #2 : Tributes to four past Faculty of ALES plant science professors - Dean Ian Morrison, Dean (and later University President) Robert Newton, Dr. Mary Spencer and Dr. Chuji Hiruki.

FULL TITLE:

TALES of ALES #2 : Tributes - Local, national and international recognition for Dean Ian Morrison, Dean Robert Newton (later President of the University of Alberta), Professor Mary Spencer, and Professor Chuji Hiruki, four influential past plant scientist members of the Faculty of ALES

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The author gratefully acknowledges access to archived documentation provided by Dr. William Vanden Born relating to the origins and history of the Plant Science mural, and for his review of the script. Reviews of this script by Professor Emeritus and past Dean Ed Tyrchniewicz, and by Dean Stan Blade are also acknowledged.

ABSTRACT:

This TALE brings forward to the attention of staff and students in the Faculty of ALES and to the public the significant academic, research and public service contributions of four remarkable plant scientists who were past Faculty of ALES members. Although the stories about each have certainly been told in the past this author retells them here with reference to how their important legacy has been ensured, through the renaming of two Faculty lounges, by other means and by national and international recognition.

The first two of the featured professors in this TALE are Professors Ian Morrison and Robert Newton, both past Deans of the Faculty, and who both had Faculty lounges renamed after them as a lasting Tribute. The third featured professor is Professor Mary Spencer, whose innovative plant physiology research led to national and international demand for her to serve in senior science policy committees that influenced the future of science funding in Canada, particularly in the plant sciences. Dr. Spencer was also well-known as a dedicated teacher and for her efforts to increase the participation of women in careers in science. The 'Mary E. Spencer Award' was established to recognize outstanding mid-career scientists in plant biology and who, like Professor Spencer, were actively engaged in public service roles in support of the plant biological sciences. The fourth featured professor in this TALE is Professor Chuji Hiruki, nationally and internationally recognized as being one of the leading plant virologists of his era, and for his excellence in teaching, research, scientific discovery and application to solving crop, horticultural and tree disease problems.

(A) History of the 4th Floor AgForestry Building Lounge Mural (originally the Plant Science Lounge)

Although the Faculty names have changed often since October 1981 when the new Agriculture Forestry Centre building was completed, the relevance of the 4th floor mural tribute to the plant sciences which are taught and researched in the Faculty has not changed at all. The philosophy, presence and history around it remains as appropriate today as it was then, and that story is told here. The colors and symbolic features in the mural provide a relaxing serenity to the lounge that all visitors there continue to

enjoy, staff, students and the public alike. This lounge was later dedicated to the memory of Professor Ian Morrison, as described later.

This brief background story is about how the large mural named 'Planta Infinitem' was completed in 1982 on the large North wall of the lounge area of the Department of Plant Science, as it was then called, on the 4th floor of what in 1982 was informally called the new Ag/Forestry Centre. Since then the Department has been renamed to the Department of Agricultural, Food and Nutritional Science (AFNS), and even the Faculty has a new name, the Faculty of Agricultural, Life and Environmental Sciences (ALES).

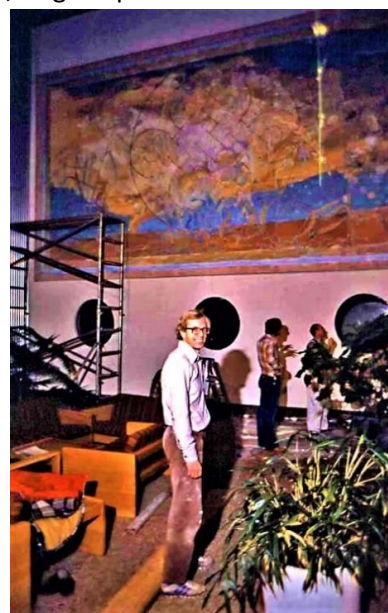
When the Department of Plant Science moved into the new building in 1981 the large North wall of its glass-roofed 4th floor lounge was a rather bleak, white and blank expanse that dominated this very well lit, bright and soon to be much used lounge area. One of the Plant Science plant pathology technicians, Mr. Tom Tribe, came forward with the idea that this would be an excellent location for a large mural to add some grace and character to the location. Dr. William (Bill) Skoropad, also a plant pathologist and Department Chair at that time, agreed with him and approved a project to go forward. A local artist and graduate student in the Department of Fine Arts at the University of Alberta, Mr. John Maywood, volunteered to develop and complete a painting and worked with a Departmental advisory committee for eight months on ideas and designs that could be incorporated into the work. The agreed concept was that this very large mural (14' x 26') should reflect the activities of the Plant Science staff and students teaching, researching, studying and learning in the building.

The completed painting represents the biosphere, and depicts the plant life within it, especially as it related to the Department of Plant Science of the 1980's. Symbolic reference is made by the artist to time and evolution in the central motif, an infinity knot. The silver central circle (difficult to see in the photograph) represents the moon, while the gold circle that encompasses the infinity knot indicates the sun. In the background there is a landscape that fills the entire eighteen panels, each of which portrays a different aspect of plant life and our relationship to it. The 'Planta Infinitem' mural was completed in 1982.

John Maywood was born in England and graduated from the Alberta College of Art, Calgary, as well as studying at the Universities of Calgary and Alberta. He continued his work as an Edmonton artist and has illustrated a variety of botanical publications in pen and ink, graphite pencil, or watercolor, including some for the Department of Plant Science and some for the University of Alberta Botanic Garden, formerly named the Devonian Botanic Garden. He has exhibited at the Edmonton Art gallery, at the UN2011 Year of the Forest ('Out on a Limb') and at the Art Gallery of Alberta. Further information about John Maywood art can be viewed at

<https://www.youraga.ca/bio/john-maywood>

(Source: Dr. Bill Vanden Born records, original photo source unknown)



John Maywood, the artist (1982)

The Plant Science lounge install

Photosynthesis	Non-vascular plants	Nitrogen fixation	Domesticated plants	Plant biochemistry	Food chains
Plant breeding	Reproduction	Forage crops, animals	Plants and water	Seeding and harvesting	Weeds
Fossil plants and fuels	Plant death and decay	Plant growth, auxin	Plant genetics	Plant diseases	Minerals in soil

Key to the 18 mural panels that artistically and abstractly illustrate 18 different aspects about plants
(Source: Keith Briggs 2022)

Planta Infinitem (1982 John Maywood)

Gold Circle around the outside of the infinity knot = The Sun

Smaller Silver Circle in the center of the infinity knot = The Moon (Very hard to spot in this photo!)



(Source: Keith Briggs 2022)

The Plant Science Lounge is dedicated to Ian Morrison, and was renamed in his honor

A very tragic event for the University and for the Faculty of ALES occurred when Dr. Ian Morrison, who had only recently stepped down as Dean, died from a horse-riding accident on January 8, 2006. It was thought appropriate to recognize his many stellar contributions to campus life, students, staff and programs in the Faculty by renaming the 4th floor AgForestry Building lounge as The Ian Morrison Lounge. This would be a lasting tribute, especially as Dr. Morrison was himself a plant scientist and a professional agronomist to whom the plant science mural itself already had special significance.



As a fellow colleague and as a friend of Dr. Morrison it is appropriate to highlight here the many contributions that Professor Morrison made during his career in agriculture and academia. This author has chosen the very fitting tribute written by Richard Carney (University of Alberta, Folio, January 20, 2006) from which to draw the following notes about Dr. Morrison. Numerous direct excerpts and quotations from that article are included here and are duly acknowledged. As a news item for campus readers the Carney article carried the headline:

'Former Agriculture Dean dies: Dr. Ian Morrison was respected for his ethics, loved by students'

Dr. Morrison had served as Dean of the Faculty of Agriculture, Forestry, and Home Economics from 1996 to 2004, was born on November 30, 1947, in Lacombe and was 58 when he passed on. His successor as Dean, Dr. John Kennelly, pointed out that "he was loved by the students and spent a huge amount of his time working to connect with them, and to build the quality of all the programs in the Faculty. We'll remember him as a gentleman with a sense of fair play and a totally ethical frame of conduct. The Faculty has lost a wonderful person and a dear friend."

Having completed his BSc and MSc at the University of Alberta, followed by a PhD in Melbourne, Australia, Dr. Morrison later became Head of the Department of Plant Science at the University of Manitoba, where he specialized for over twenty years in crop production, his work primarily relating to weed control in field and forage crops. Both in Manitoba and in Alberta he worked closely with the producer associations, the Provincial Governments and the agrichemical industry in developing improved weed control and crop management practices. Much of the pioneering research on herbicide resistance in Western Canada was undertaken by Morrison, by his graduate students, and by his other associates.

In 1997 Morrison and his coauthors won the Outstanding Paper in Weed Science Award for their contribution, 'The Evolution and Genetics of Herbicide Resistance in Agricultural Weeds'. In 1999 he was elected a Fellow of the Weed Science Society of America in recognition of his contributions to the discipline in research, teaching and outreach. Following his term as Dean at the University of Alberta Morrison served as visiting scientist at the Agricultural Production Systems Research Unit in Toowoomba, Queensland, Australia. He was scheduled to return to teaching and research at the University of Alberta in 2006. His academic and agricultural legacy is very substantial and continuing.

Morrison was an avid horseman. He and his family kept horses for pleasure riding, back-country packing and carriage driving. He was also a member of the Alberta Trail Riders Association, the Alberta Carriage Driving Association and the Alberta Equestrian Federation.

(B) The AgForestry Centre Faculty Lounge is dedicated to Robert Newton and renamed in his honor

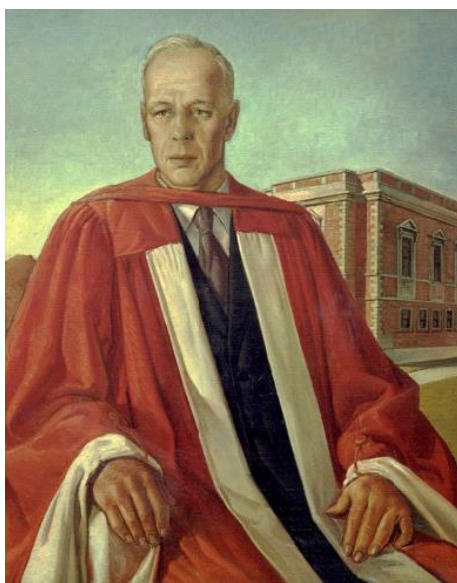
Prior to the completion of the Agriculture and Forestry Centre in 1981 several of the Faculty Departments were located in makeshift facilities much scattered around campus, which significantly hindered interdisciplinary interactions between staff and students with different interests. A large Faculty Lounge was therefore designed into the new building, to be a place where students and staff with those different academic and social interests could gather and meet informally. This new Faculty Lounge was located on the 2nd floor just outside the main Faculty Office. To draw particular attention to the Faculty mandate that included forestry a cross-sectional slice (called a cookie) of a Douglas fir that was over 900

years old and three meters across was installed on one side of the Lounge, where it commands a very striking presence and has become a notable campus feature.

The Robert Newton Lounge, 2nd floor, AgForestry Centre (Source: Keith Briggs 2022)



1952 Portrait of Professor Robert Newton, past President, University of Alberta
Artist: Henry George Glyde; Oil on canvas 131 x 109 cm



(Source: University of Alberta Collections)

Following the dedication of the Ian Morrison Lounge the Faculty considered that the Faculty Lounge should also be renamed, to celebrate the contribution of a very influential academic in the Faculty and University. In recognition of his many different University roles as Professor, Department Chair, Dean and finally as University President, the selected nominee for that tribute was Dr. Robert Newton, also a plant scientist.

Robert Newton (February 7, 1889 – November 22, 1985) was a Canadian biochemist and academic administrator, born in Montreal and one of five siblings all of whom obtained PhD's and had careers in science. Newton attended McGill University (BSc 1912), the University of Manitoba (MSc 1921, PhD 1923), received his DSc from the University of Alberta, and was a veteran of World War I. In 1919, he became Professor of field husbandry at the University of Alberta where his research was focused on wheat winter hardiness, drought resistance and resistance to rust. His best university students were sent abroad to earn PhD degrees in the world's leading institutions and came home to later constitute the core of the Canadian National Research Council's biology staff in Ottawa.

Newton became chief adviser on agricultural science to the University of Alberta President Henry Marshall Tory, served as Director of the National Research Council's Division of Biology and Agriculture from 1932 to 1940, and eventually succeeded Dr. Tory as Chairman of the influential Canadian Grain Research Committee. In addition to his role as Professor of plant biochemistry in the Department of Field Crops he also became Head of the Department from 1924 to 1932. He took a leave to become the Head of the Applied Biology Section of the National Research Council in Ottawa but returned to the University of Alberta in 1940 to become the Dean of Agriculture. Newton served in that capacity only briefly until he was named President of the University in 1941, which role he occupied until his retirement to the Pacific Coast of Canada in 1950. He died in California in 1985.

Those who spend time in the Robert Newton Lounge may not realize that they are seated in the shadow of a giant influencer of the agricultural sciences, and a professor who set the nature of academia at the University of Alberta as well as the very roots of national support for the sciences in Canada. The tribute made to Robert Newton by the naming of this lounge is a fitting one indeed.

(C) All about another distinguished plant scientist, Professor Emeritus Mary Spencer, the first woman academic appointed in the Faculty of ALES

After reviewing the many academic and national contributions of Professor Robert Newton this author realized that there was another plant scientist who worked in the Faculty and achieved many similar kinds of outcomes as Newton, (although not including a University Presidential appointment). That person, now deceased in 2023, is Professor Emeritus Mary Eileen Spencer, and her many achievements are described here, based mainly on her own notes in the University of Alberta Archives entitled 'Recognizing the Real Joy'. In the photo below she is shown receiving one of her very many career awards, this one from the Canadian Society of Plant Biologists (CSPB) Society President Peter Joliffe in 1991, the

Gold Medal for significant plant research and discovery. Spencer was both a founding and very active member of CSPB, as well as a Fellow of the Canadian Institute of Chemistry.



Mary Spencer receives her 1991 Gold Medal from CSPB

Professor Spencer's Iowa-born mother was a member of a pioneer family that settled near Camrose, Alberta, where her father was a schoolteacher before moving to Regina, where he became a lawyer. After completing her schooling in Regina Spencer obtained a BA in biochemistry with honors at the University of Saskatchewan (1945), followed by an MSc from Bryn Mawr College, Pennsylvania. Following three years working in industry Professor Spencer completed her PhD in agricultural chemistry at the University of California, Berkeley, especially studying the role of ethylene. Ethylene is a hormone that as well as affecting many other functions in plants, influences ripening processes. On completion of her PhD she joined the academic staff at the University of California at Berkeley.

Professor Spencer's first University appointment at the University of Alberta was in 1953 in the Faculty of Medicine as an Assistant Professor in the Department of Biochemistry, where at one point she was also Acting Department Chair. In 1963 she transferred to the Department of Plant Science in the Faculty of Agriculture, becoming the very first woman academic appointed in that Faculty. Her subsequent wide-ranging studies about ethylene in plants demonstrated its role in fruit ripening (both natural and as a ripening agent in commercial fruit marketing), germination control, plant cell growth, plant aging and its role influencing other environmental gases, such as carbon dioxide. Spencer's scientific peers have described her career long research accomplishments as 'formidable', but she has also received national recognition for her other broader roles in science, many of which parallel those of Professor Newton during his career. Much of this recognition was related to appointments Spencer received to senior advisory roles in the National Research Council (NRC) and consecutive term appointments to the National Science and Engineering Research Council (NSERC). Spencer was one of the first two women to be appointed to these very influential Canadian National Science Councils and her advisory roles included subject areas in both biology and forestry.

Spencer was also very active in promoting the sciences as a favorable career area for women at Universities and elsewhere. This has been a continuing activity area paralleling her many roles in the management of the University of Alberta itself, including membership in the University Research Policy Committee, the Faculty Councils of Arts and Science, Medicine and Home Economics, and in the late 1970's, three years on the Board of Governors. In 1990 Dr. Spencer published some personal memoirs

entitled 'Recognizing the Real Joy', which highlighted her special devotion to teaching and the benefits that accrued both to instructors and students through the teaching process. That insightful historical document can be read in the History Trails of the University of Alberta Alumnus Office, viewable online by searching there for 'Mary Spencer Recognizing the Real Joy'.

Her many awards and honors are far too many to show here, but a few clearly stand out, and are especially worthy of continuing recognition. In 1984 she was named 'University Professor', the most prestigious award that any University of Alberta academic can receive, that values demonstrated excellence in the pluralities of undergraduate and graduate level teaching, research, campus and community activities and public service. In 1976 Professor Spencer was elected to the Royal Society of Canada, and she is also a recipient of three Queen Elizabeth II Silver Jubilee Medals, (Silver 1997, Gold 2002 and Diamond 2012). In 2001 the Governor General of Canada awarded Professor Mary Eileen Spencer Membership of the Order of Canada. The following citation was read at her investiture on August 31, 2002.

'She has been a role model for women scientists in Canada for more than 50 years. Professor Emeritus of Plant Science and biochemistry at the University of Alberta, she is an international authority on ethylene, its production and its effect on the environment. Appointed to many leadership roles within federal scientific research organizations, she has had a direct impact on policy and program development in Canada. A representative on both the International Council of Scientific Unions and the Organization for Economic Co-operation and Development (OECD), she has helped to promote women's roles in the international scientific community'.

Professor Mary Spencer's exceptional accomplishments and honors have deservedly received appropriate public recognition in the past. This author (a contemporary of Spencer's for some years) believes that very few present staff or student members of the Faculty are aware of her past University of Alberta accomplishments, that certainly rank at a very high level. If there was one more Faculty lounge that could be dedicated to another plant scientist / academic from the past, Professor Spencer would be a very good choice for that tribute, a person closely comparable to Newton in her impact, especially for her role in outlining opportunities for women in science.

A special award was notably established to specifically recognize two facets of Professor Mary Spencer's career achievements, research and public service. The Mary E. Spencer Award was established by the Canadian Society of Plant Biologists 'to recognize outstanding research in the field of plant biology and active public service engagement in the plant biology community by a mid-career researcher'. This prestigious award was initially established with a generous donation by the Spencer family, but additional donations to support it are welcome. Persons wishing to contribute to or to learn more about the award can visit the Canadian Society of Plant Biologists website at the following URL for further information.

<https://cspb-scbv.ca>

Mary Spencer has always been a champion for the development of the skills, education and career development for students interested in all forms of University education, and particularly for the potentials of women in science. Her love for this aspect of her career was well captured by her own chapter title for some writing that she completed at the time of the 100th anniversary of the Faculty. She entitled it 'Recognizing the Real Joy'. Given her dedication to the outcomes for students whom she

influenced the University was very fortunate that Professor Spencer chose its institution as the preferred location for her academic career.

(D) All about Professor Chuji Hiruki, Internationally recognized world expert plant pathologist, discoverer of new viruses and mycoplasmas

Professor Chuji Hiruki was born in 1931 in Fukue, Nagasaki, Japan, the eldest son of a farmer. He obtained his BSC and PhD at Kyushu University, Japan (the latter after holding a Fulbright Scholarship to study in the USA, as visiting scientist at the University of California, and as honorary fellow at the University of Wisconsin). He was then appointed as plant pathologist at the Hatano Tobacco Experimental Station, in Niigata, Japan from 1954 – 1965. He was appointed Assistant Professor of plant pathology at the University of Alberta in 1966. Professor Hiruki had an extremely successful teaching and research career in the area of plant virology and as a science educator and was described in the 1996 Journal of Plant pathology as ‘one of Canada’s most distinguished plant pathologists. He has gained national and international recognition for his excellence in research, teaching and professional work’.



Professor Chuji Hiruki



Kyushu University Nagasaki, Japan

Because of the international interest in his research Hiruki served as a Visiting Professor at numerous universities during his career: University of California, Berkeley (1964-1964); Institut National de la Recherche Agronomique, Versailles, France (1972); Wageningen Agricultural University, Netherlands (1973); Commonwealth Scholarship and Fellowship Plan, University of Queensland, Brisbane, Australia (1984); Honorary Distinguished Scientist – China Paulownia Research Centre (1993 until retirement). His consultancies included FAO/UN, Chair, International Working Group Plant Viruses with Fungal vectors (1988-1993), and the International Union of Forest Research Organizations, Working Party on Virus and Mycoplasma Diseases (1982 – retirement). He was active in professional societies (e.g. Canadian Phytopathological Society), as an international consultant on biotechnical and agricultural pathology, and published over 200 scientific papers with over 300 conference presentations by members of his team.



Major crop plant viruses occur worldwide



Potato virus



Viral leaf yellows

Hiruki's research focused on the characterization, diagnosis and control of important plant diseases caused by viruses, viroids, and mycoplasmas and he quickly became the worldwide authority on the last group of organisms. He had a pivotal role in defining a new family of viruses, the Dianthovirus group, developed a virus-free seed potato system for W. Canada, and pioneered the use of genetic information as the basis for virus classification. He specialized in studying and characterizing pathogens, diagnostic techniques, and the genomic interactions between plant hosts and their pathogens under controlled and natural environmental conditions. The findings of Hiruki's research team significantly changed the basic understanding of how pathogens work, as well as the approaches which can be used to control them in crop and horticultural plants and trees. This major contribution to the scientific knowledge in his area of experience and research is truly worthy of this editorial Tribute on behalf of the University of Alberta, which was privileged to have him on staff during his career.

This TALE is about Tributes, and Professor Hiruki received very many of those as awards along the way during that very productive career. For completeness, all those of which this author is aware are listed here: Fellow, Royal Society of Canada (1990); Alberta Science and Technology Leadership Award; Grand Prize – International Society of Plant Pathology (for identifying an abnormal virus in a pasture); Arthur Gilbert McCalla Professorship and Distinguished University Professorship (University of Alberta, 1991); Lifetime Achievement Award and Fellow, American Phytopathological Society (Pacific Division, 1993); Canada Phytopathological Society (President 1990-1991, Award for Outstanding Research 1996); Excellence in Research Award, Phytopathological Society of Japan (1990); Distinguished Citizen Award, City of Fukue, Japan; J. Gordin Kaplan Award for Excellence in Research.

Another University of Alberta Tribute due to Chuji Hiruki is to recognize that he was also an excellent and inspiring teacher, and encouraged many of his students (undergraduates and his MSc and PhD students) to continue on to careers as instructors or researchers at significant plant research centers and Universities in Canada and overseas. He alone established one of the first graduate programs in plant virology in Canada. Chuji himself was a very well-liked individual, and was always interested in those around him and what they were up to, at work and in their personal interests. Beyond his own work interests Chuji also had many hobbies, including visits with his grandchildren, gardening, growing orchids, photography and world travel. On retirement (at GoTo City, Nagasaki, Japan) Hiruki devoted much time to his special interest in the Camellia flower and its' plant biology, and became Vice-President of both the GoTo Camellia Society and the Japan Camellia Society, joined the International Camellia Society and was involved in promoting the Camellia as the flower of Japan. In Edmonton, and in recognition of his work with the Camellia, Professor Hiruki received the '2017/18 Commendation' from the Calgary-based Japanese Consul-General, Mr. Tanabe.

In 2018 Chuji Hiruki was awarded the Japanese Order of the Sacred Treasure (Gold Rays with Rosette), an award of appreciation from the Emperor of Japan to those who have made distinguished contributions to their field. Professor Chuji Hiruki passed away peacefully in Japan in 2021 at age 90. He will be remembered at the University of Alberta as well representing the epitome of everything that the Professorship is all about. Very well done, Chuji, it was a privilege to know you both as a colleague at work and as a family friend!



Emeritus Professor Chuji Hiruki receives the 2017/18 Japanese Consul-General Commendation from Mr. Tanabe, Edmonton



Chuji's favorite flower – the Camellia