

2023 TALE #6 Archive FINAL Range Team Briggs July 26 2023 (File name)

ABOUT TALES OF ALES:

TALES of ALES: Celebrating the Past, and Changing the Future - Stories about some University of Alberta Professors, students and Alumni 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, staff, students and Alumni all found in the history of AFNS. There are additional authors in some cases.

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ABBREVIATED TITLE:

TALE #6 ALES Range Team ‘Best in N. America’ academic student winners for 40+ years at the Society for Range Management competitions

FULL TITLE:

TALE #6 : Irving, B., Davies, M. J., and Briggs, K. G. 2023. All about the ‘Best in N. America’ Faculty of ALES undergraduate Range Team successes for 40+ years at the N. American Society for Range Management academic competitions: Who they were and how they did it!

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SYNOPSIS:

(Note by author Briggs: The Synopsis describes what kind of information will be found in Tale #6. Readers interested in the full story may wish to skip the Synopsis and go directly to page 6 to read the full story)

This TALE #6 is a story about the 4+ decades-long excellence in teaching and learning achieved by instructors and 'Range Team' undergraduate student members specialising in the area of range management in the Faculty of Agricultural, Life and Environmental Sciences (ALES) at the University of Alberta. The high level of excellence of the students is demonstrated by the ALES Range Team becoming the 'winningest' one ever in their discipline specialisation, in some years competing with as many as 25 other teams from the best Faculty level range management programs at the most prestigious Universities for the discipline throughout N. America. They have consistently collected most of the top prizes for nearly four decades, in academic competitions run by the international Society for Range Management (SRM).

Professor Arthur (Art) Bailey was the originator of the Range Management specialisation at the University of Alberta, the first one in Canada, and quickly received the 'Best Faculty Teacher' award from the ALES undergraduate students. Arising from his professional linkages and interests with the N. American Society for Range Management (SRM), Bailey organised the participation of his students in the range plant identification and academic range management competitions run each year by the SRM, starting in 1981. Range Team Coaches were appointed by Bailey and subsequent Range Management professors (Dr. Ed Bork and Dr. Cameron Carlisle) assisted in the teaching and research programs, but also took on the special responsibility for preparing the Range Teams for the SRM academic competitions. Three different Coaches were involved over the years, Ms Mary Jane Davies (1981 - 1985), Dr. Barry Irving (1986 - 2017) and Ms Lisa Raatz (2018 – continuing). The Plant Identification (PID) competition requires students to correctly identify by Latin name 100 competition samples of common range species of N. America (out of 200 possible species), based on a quick inspection of mounted herbarium quality plant samples, as seed, flower or vegetative parts. The Undergraduate Range Management Examination (URME) is a time limited multiple-choice exam where questions are based on any aspect of range management that students will have learned about in their entire curriculum. Students who do well in these two competitions are in extremely high demand for range management positions on graduation!

The Faculty of ALES Range Teams achieved an extraordinary level of success in these competitions for the entire duration of the 42 years in which they competed, against the very best range management University programs from the USA, Mexico and Canada, each year at SRM typically involving 150+ competing students. This high level of University of Alberta Range Team and individual academic performance at the Society for Range Management is shown in Tables A and B in this Synopsis section.

Table A Summary from 43 years of competing at the Society for Range Management competitions (1981 – 2023)
Frequency of Individual Student Award Placings: Plant ID, URME, and Individual High Score, or Combined Score

Placing	Plant ID	Undergraduate Range Management Examination	Individual High Score or Combined Score
1st	5	7	16
2nd	4	8	14
3rd	3	5	17
4th	5	11	13
5th	7	3	10
Totals	24	34	70

Please scroll down Thank you !

Table B Range Team Awards for the Plant ID and URME competitions of the Society for Range Management
(Rankings, listed by year and competition location, vs 18 to 25 other competing N. American Universities
PID = Plant Identification; URM = Undergraduate Range Management)

Range Team Awards	PID	URM		Range Team Awards	PID	URM
Year / Location	exam	exam		Year / Location	exam	exam
Mary Jane Davies, Coach						
1983 Albuquerque NM		3				
1984 Salt Lake City UT	5					
1985 Rapid City SD	3					
Barry Irving, Coach						
1989 Billings MT	5	3		2004 Salt Lake City UT	2	1
1990 Reno NV	9	2		2005 Fort Worth TX	2	1
1991 Washington DC	5	1		2006 Vancouver Canada	2	2
1992 Spokane WA	7	2		2007 Reno NV	2	2
1993 Albuquerque NM	3	1		2008 Louisville KY	2	1
1994 Colorado Springs CO	6	2		2009 Albuquerque NM	3	3
1995 Phoenix AZ	3	1		2010 Denver CO	3	3
1996 Wichita KS	2	3		2011 Billings MT	2	1
1997 Rapid City SD	2	2		2012 Spokane WA	2	1
1998 Guadalajara Mexico	2	3		2013 Oklahoma City OK	2	2
1999 Omaha NE	2	3		2014 Orlando FL	3	1
2000 Boise ID	2	3		2015 Sacramento CA	1	2
2001 Kona HI	1	1		2016 Corpus Christi TX	3	1
2002 Kansas City MO	4	2		2017 St. George UT	1	3
2003 Casper WY	4	2		2018 Reno NV	2	7
Lisa Raatz, Coach						
2019 Minneapolis MN	2	4				
2020 Denver CO	2	5				
2021 (Virtual due to Covid)	2	4				
2022 Albuquerque NM	3	2				
2023* Boise ID	2	3				

* Competitor numbers in 2023: 21 N. American University Range Teams; Plant ID 96 students; URME 165 students
Team Awards summary, and additional awards

A total of 66 Range Team 1st to 5th place finishes, including 14 1st place finishes during 43 years of competing
Other awards: 1982 1st place for Student Display; 2014 3rd place Rangeland Cup; 2015 2nd place Rangeland Cup

Recognition of the excellence in the teaching program that brought these student achievements about was provided by the Society for Range Management awarding both Professor Art Bailey and Dr. Barry Irving their most prestigious international Range Management prize, the 'W. R. Chapline Award'. In addition, Professor Bailey recognised that it would be very costly for Range Team students to attend the SRM meetings annually so he spent much effort gaining financial support from the ranching community, and was very successful at that, gaining funding for student travel and scholarships, as well as endowments. Important contributors who made very significant contributions included John and

Eleanor Cross, George Chattaway (Bar S Ranch) and Harry Cornwell. The excellence within the entire Range Management program at the University of Alberta later also led to the donation of the 5,000 hectare Edwin and Ruth Matheis family ranch, now known as the Matheis Research Ranch, presently used extensively for teaching, R&D and extension.

Please scroll down ! Thank you

TALES of ALES #6 TITLE:

TALE #6 Irving, B., Davies, M. J., and Briggs, K. G. 2023. All about the Faculty of ALES undergraduate Range Team 'Best in N. America' successes for 40+ years at the Society for Range Management academic competitions: Who they were and how they did it!

Background notes by Keith Briggs about this Range Team TALE #6

This TALE of ALES is a story about the 4+ decades-long excellence in teaching and learning achieved by instructors and 'Range Team' undergraduate student members specialising in the area of range management in the Faculty of Agricultural, Life and Environmental Sciences (ALES) at the University of Alberta. The high level of excellence of the students is demonstrated by the ALES Range Team becoming the 'winningest' one ever in their discipline specialisation, in some years competing with as many as 25 other teams from the best Faculty level range management programs at the most prestigious Universities throughout N. America. They have consistently collected most of the top prizes for nearly four decades, in academic competitions run by the international Society of Range Management (SRM). Almost every year that they competed the Faculty of ALES was able to share and celebrate that year's story about yet another annual success by students returning from the N. American SRM academic competitions. Briggs, the third author of this story, felt that it was time to also tell and share the full story about how this level of continual prestigious academic achievement was gained. Briggs offered to put the story together, and the team Coaches assembled the content from their records. Those Coaches also wrote most of that story, whilst Briggs took on the task of editing the large amount of content into a readable and interesting format. Other instructors had also contributed considerably to the team successes and the Coaches also researched and described those other inputs to the program. The singular and major long-term contribution is also highlighted that Professor Art Bailey made in forming the very first team, in providing many years of academic instruction, and also in gaining financial support for the teams over many years, from producers and other Faculty friends of the program.

An important function of this story, in Briggs opinion, is also to conserve in the Archives an account that includes the names of all those students who competed, and also of those who won individual awards at SRM. After graduation these many motivated students went on to make their own contributions to the profession, in production agriculture, in agribusiness, in the field and lab, in research, in advisory roles and public service, and in academic and other areas. That, after all, is a central University goal sought from all this teaching and learning and it proved to be one that was achieved in spades. Barry Irving also shares his enlightened teaching philosophy with the reader in Appendix 3. Third author Briggs, as past Chair of the Department of Agricultural, Food and Nutritional Science, feels that Barry's well considered and clearly described concepts in that regard are ones from which any University level instructor of any subject would benefit from its adoption. 'Best teaching' optimises the development of the life-long potential and motivation of students during that all important but usually very time-limited student/instructor interaction on campus. You will read in this story how that kind of interaction, with a focus on encouraging lifelong motivation and achievement in learning, really worked for students in the 'Range Teams' over many years, from the very beginning, and how it continues today!

Introduction

The Faculty of Agriculture, Life and Environmental Sciences (ALES) has a long history of research and teaching in all facets of agricultural production and land conservation systems, including rangeland management.



Rangeland field research and instruction
(Photo credit: Faculty of ALES, UofA)



S. Alberta rangelands looking towards Montana
(Photo credit: David Thielen: unsplash.com)

Range Management as a discipline started at the University of Alberta in 1966 when Professor Arthur (Art) Bailey was hired to conduct research into weeds in Alberta. At that time the primary weed of interest was brush. Professor Bailey had received his doctoral training in Oregon with a major in rangeland ecology. He pioneered range management as a Faculty discipline at the University of Alberta and immediately started assembling a suite of courses to support an undergraduate degree specialization. Principles of Range Management, Range Plant Ecology and Management, and Advanced Topics in Range Management were the three foundational courses developed to form the backbone of the Range and Pasture or Range and Wildlife Management specializations. All courses had significant components of experiential learning in keeping with Professor Bailey's belief that ecological training of undergraduate students had to include hands-on experience to prepare them for field related careers. In the late 1970's a cohort of ranchers from southern Alberta advocated that a fourth course be developed to prepare students for academic competitions sponsored by the international Society for Range Management (SRM), and specifically for the Plant Judging Contest. A team of ranchers led by Ed McKinnon, Ed Nelson, John Cross and many others wanted Canada, Alberta, and the University of Alberta to be represented in these annual competitions. Faculty Dean Roy Berg was willing to find the funds to support student airfare and hotel accommodation for two years. This supportive advocacy plus the dedication of Professor Bailey led to the first University of Alberta Range Team being formed in 1981, to compete at the SRM annual meetings at Tulsa, Oklahoma.



Logistics for Establishing a University of Alberta Range Team

Creating a new extra-curricular activity (such as a Range Team) is not a small endeavor. Resources such as staff time, teaching space, teaching materials, travel funds, and all levels of institutional support had to be created or re-allocated. Fortunately, the 1970's were financially prosperous and productive times for the University of Alberta. At that time the Plant Science Department possessed a model that assigned a non-academic staff member to support the research and teaching for each professorial position. Mary Jane Davies was assigned to support Professor Bailey and she became the first Coach of the University of Alberta Range Team. Mary Jane immediately started to assemble a collection of plant materials needed for a Range Management Herbarium, from which plant identification could be taught. Mary Jane was fortunate to have a trained botanist as a mentor in these early years. Dr. J. L. Bolton helped Mary Jane hone her plant identification skills and together they invested a great deal of time collecting, tabulating, mounting, and filing herbarium resources. Mary Jane retired from the University of Alberta in 1985 and her replacement was Barry Irving. Robin Lagroix-McLean (a Range Team member in 1985) provided valuable continuity between team Coaches Mary Jane Davies and Barry Irving, and Robin and Barry co-coached together in that transition year. Barry further developed the herbarium through collection of local material and by continuing active specimen trading with other Coaches from schools throughout western North America. Barry spent countless hours mounting material that Mary Jane and Dr. Bolton had assembled. Eventually the Range Team Herbarium grew into four distinct collections. This included a complete set of typical plant mounts used for the initial learning of basic plant species characteristics, a collection for intermediate level learning (5-10 mounted samples that display the variation within each of the 200 plant species), a collection of random herbarium samples to support advanced learning, and a dedicated instructor herbarium used for tests and exams.

Space to house the herbarium materials was not readily available in the General Service Building where Professor Bailey was located. In 1981 the Faculty of ALES moved into its new Agriculture/Forestry (Ag/For) building, but Plant Science (the home Department for the Range Team) had no suitable space available there for use as a teaching herbarium. Fortunately, the Department of Forest Science (chaired by Professor Jim Beck) provided space for teaching and study and throughout his time as Chair Jim also remained a strong supporter of the Range Team. The teaching herbarium was eventually assigned a permanent home in the basement of the Ag/For building. The Range Team room used since then has had many nicknames over the years and is now affectionately called the 'Bat Cave' by Range Team students.

University of Alberta campus homes for Range Team learning (including the 'Batcave' range program herbarium)



General Services building (1981)



AgForestry building (1981 – 2023 cont.)



The 'Batcave' in the AgFor basement

The Society for Range Management added a second major student competition in 1983. That was the Undergraduate Range Management Exam (URME), a written exam that draws on knowledge gained in all the courses students have taken during their four years of a typical degree in Range Management. Early in his career, Barry Irving created a study guide to prepare students for writing the URME. Barry's study guide (created for both Plant Identification and the URME) was one of the innovations developed in the history of the Range Team that kept the University of Alberta team competitive. In simplistic terms the Range Team study guide is a collection of knowledge gathered by Dr. Barry Irving (who had furthered his education during his tenure as Range Team Coach and concurrently completed his own MSc and PhD at the University of Alberta). This collection was further amplified by range students over the years. The study guide is a living document that has evolved and adapted to the changing needs for training a Range Team.

When the Range Team was started in 1981, finances to send the team to the competitions were supplied by the Departments of Animal Science, Plant Science, Forest Science, and the Faculty of Agriculture, Forestry, and Home Economics, each splitting the costs depending on the number of students that came from each program. In 1986, a series of budget cuts forced onto the University by the Alberta Government resulted in this support dwindling significantly. As that funding source disappeared rancher John Cross donated the difference, for many years himself essentially giving out-of-pocket what was needed. It was always the long-term vision of Professor Bailey to build stable funding to support the Range Team. Together with the donations of John Cross, they started an endowment (the Range Management Endowment) from which the interest was used to support Team travel. Professor Bailey also accessed a Government of Alberta matching funding program and gradually built the endowment so that eventually it completely supported all the team travel expenses. It cannot be over-emphasized how critical it was to receive excellent guidance from the University of Alberta Endowment Group about how to provide reliable long-term financial stability for the teams. Similarly, in the first two years Dean Roy Berg also endorsed the long-term vision for these academic competitions and quickly became a solid supporter of the Range Team throughout his tenure as Dean. It took over ten years and countless late nights writing letters to potential donors, including many interested Alberta SRM members, parents of the student team members, and a few supportive University of Alberta staff, to develop the financial stability required. Once that was achieved, the Range Team Coaches were then able to more effectively address the preparation of each year's Range Team without the added stress of chasing down sufficient funds to enable each year's Team and Coaches to attend. John Cross passed away in the 1990's, and his spouse Eleanor continued donating to the Range Team project until her own passing in 2006, contributing to both annual travel costs and further growth of the endowment. Eleanor Cross also contributed to a new endowment, to support a new John Cross Memorial Award. This award is given each year to the Range Team student that earns the highest combined marks on the URME and the Plant ID Contest at the annual competitions sponsored by the SRM. The John Cross Memorial Award consists of a commemorative plaque plus a cash award.

During the same time frame that John Cross began donating funds to support the travel costs of the Range Team, two additional individuals also began contributing to range student activities. George Chattaway (Bar S Ranch west of Nanton, Alberta) and Harry Cornwell (resident of Airdrie, Alberta, with a keen interest in rangeland ecology) were also significant contributors to team travel. Sadly, they are now both deceased. George Chattaway also donated the corpus of an Endowment that supports the Chattaway scholarship at the University of Alberta, which is given annually to a student who has achieved high academic standards in the two primary range management classes, ENCS 356 and ENCS 406. Harry further donated funds to the University of Alberta through his estate and this led to several other scholarships for both undergraduate and graduate students in the Faculty of ALES that are now given in his name. The significant contributions of John and Eleanor Cross, George Chattaway and the Bar S Ranch, and Harry Cornwell in support of the Range Team cannot be overstated. Simply put, the Range Team would have dissolved in 1986 without their private donations. Although there were many other donors to the Range Team travel fund the bulk of the endowment owes its origin to those four individuals.

Instructors

The University of Alberta Range Team was always supported by just a small but dedicated team of instructors. Initially, in 1981, Professor Art Bailey held the only academic position in range management at the University of Alberta, and, indeed, in all of the Prairie Provinces. The task of producing a team of undergraduates that could compete and be competitive was thus a daunting one. Other schools who participated in the SRM undergraduate competitions had access to an entire Department of professors and a few schools had an entire Faculty of professors and instructors. Texas A&M, Texas Tech, Brigham Young, Colorado State, and Montana State were but a few of the top schools in those early days. By contrast, the University of Alberta employed just one range professor (Bailey) and one technologist (Mary Jane Davies). Professor Bailey focussed on the basic instruction in the science of range management and Mary Jane Davies (Range Team Coach) provided detailed instruction in range plant identification. In the early days of the Range Team's participation at the SRM student competitions, neither the University of Alberta range professor nor the plant team Coach had any prior experience in preparing the undergraduate student team for the URME written test, nor for the range Plant Identification contest. University of Alberta staff depended heavily on American range professor contacts at Texas Tech and other universities for guidance. Together Professor Bailey and Mary Jane Davies nevertheless quickly accomplished the unimaginable. They achieved an award-winning 5th place for the URME in 1984, plus a 3rd place Plant Identification award in 1985.

The story about how all the Range Team award winning happened over four decades is told in the next sections. Part of that story along the way includes two of the instructors, Professor Art Bailey and Dr. Barry Irving, each receiving internationally prestigious awards in the area of range management. In 1997, the same year that he retired, Professor Bailey received the SRM W. R. Chapline Award 'for exceptional and sustained research accomplishments related to rangelands'. In 2017 Dr. Barry Irving received the SRM W. R. Chapline Land Stewardship Award 'for effective accomplishments and contributions in the application of the art and science of range management specific to rangeland entities, and to wildlife and domestic livestock on such lands'. Barry was also elected the 2nd Vice President of SRM and graduated to President in 2019.

All this demonstrable excellence by the range management instructors and students also resulted in the extremely generous gift of the Mattheis family of their Ranch to the Faculty, now named the Mattheis Research Station. It has developed as yet another essential facility that further supports the range management teaching and research goals at the Faculty of ALES.

The University of Alberta Range Team Coaches



Mary Jane Davies
(1st Coach)



Barry Irving receives SRM Award for outstanding teaching and other contributions to range management



Lisa Raatz, 'out on the range!'

The University of Alberta Range Management Program Professors (Photo sources: RRI and staff)



Art Bailey, at SRM



Edward Bork



Cameron Carlyle

‘In her own words’: Mary Jane Davies describes her experiences in the formative days of the Range Team

In May of 1973 I accepted a temporary ten-month position as a technician in the Department of Plant Science at the University of Alberta, working for the horticulture group of Professors Andrew, Toop and Knowles. In April of 1974 I moved to a permanent technician appointment that was shared between Professors Corns and Bailey. Corns was involved in research in weed control, and I also helped teach in his weed identification labs. Bailey taught range management and conducted research in that area. I was involved in teaching plant identification in Bailey’s range management class, and by mid-1975 began working full-time for his range management program.

One of the first tasks Bailey asked me to do was to establish an herbarium. Thanks to my training from Mr. B.J. Godwin at Olds College, Alberta, I knew how to collect, press, and mount samples for entry into a herbarium. In addition, I assisted Bailey in fire research at the University of Alberta Ranch at Kinsella, Alberta. I collected field data for him with the assistance of summer students, and also helped in data collection for some graduate student projects. In 1979, my position was upgraded to Technologist.

When Bailey returned from the Society for Range Management Annual meeting in February, 1980, he told me that the SRM annual meeting would be in Calgary in 1982 and that he wanted a University of Alberta student Plant Identification Team to participate there. I suggested that I try to convince some students to learn the plants, students that would also be willing to compete as a team at Tulsa, Oklahoma in February of 1981. I felt that it would give us an idea of what we would have to prepare for in Calgary. He concurred and gave me the names of a few Range Team Coaches in the US whom I contacted, and they proved to be so very helpful to our new endeavor. It was an onerous undertaking that year as the Plant Identification Competition includes 200 North American plants that all have to be learned. The competitors are required to know the Latin name (spelled correctly), and the longevity and the origin of each species,

identify to the species after only 1 minute of specimen observation, and then must move to the next specimen. The test has 100 mounted samples and there are often duplicates. We understood the basics of the test but for many of the plants species we did even not have samples on hand which we could view and learn. Under these circumstances I was very fortunate to be able to convince three students just to do their best with what we did have for training, as we prepared for the their first competition.

Consequently, the very first University of Alberta Student Plant Identification (PID) Range Team competed at Tulsa, Oklahoma in 1981. It consisted of the three students Jan Hollingshead (Range management major), Colin Stone (Range management major) and Alan Robertson (Forestry major). Other Universities competing (from all of N. America including Mexico) were allowed four students per team, and the team score was then calculated from the top three performers in the team. Not surprisingly we placed last, but we did learn so very much. For example, we learned that students are allowed to use illuminated hand lenses to help in identifying each sample, which makes a big difference in accuracy. As a Coach, you are assigned species from the list from your region, for which you are required to send representative samples to all the other Coaches. Many of the Coaches sent us extra material which was very helpful, especially in the early years. Coaches may also send mounted samples to the contest herbarium which I did for the five years that I coached. Each specimen must be identified and verified by another plant taxonomist. A very well-respected Alberta botanist, Ms. Gale Rankin, kindly accommodated me in that task. When subsequent teams also began to participate in the Undergraduate Range Management written Exam (URME), I also forwarded suitable exam questions to those who would run the competitions.

Prior to the Calgary meeting in February of 1982, I was asked to attend the organizational meetings, to ensure that all the planned student activities at the meetings were addressed and properly arranged. One of the members had contacts with the City of Calgary and the Calgary Stampede Board, so he was able to obtain 'White Hats' for all the volunteers and all competing students. It was at one of these planning meetings that I learned that my University of Alberta team students were not the first Canadians to take part in the annual SRM meetings. In 1969, the annual meeting had also been held in Calgary and Mr. B.J. Godwin from the Olds College Horticulture Program had brought with him students to compete in the Plant Identification contest.

For the Calgary 1982 competition I was able to attract a larger number of students to study for the Plant Identification exam. In most years team members were also Range Management Majors. In 1982 the team members were Jan Hollingshead, Colin Stone, Rhoda Norden, Lori Enns, Rob Henry, Craig Richardson, Ron Gietz and Keith Stretch. Keith Jones also attended and presented a paper at the Undergraduate Student Paper Session. In Calgary we placed higher than in 1981 in the Team Plant Identification competition. The 1982 team also won 1st place for the Student Display, the first of many University of Alberta Range Team wins that would be achieved throughout the following years.

The 1983 SRM competition was in Albuquerque, New Mexico and the team members were Lori Enns, Craig Richardson, Nancy Paul, Michael Gray, Gordon Dinwoodie and Adrienne Forest (a Zoology major from the Faculty of Science). The team again moved up in the Plant Identification standings but were not yet in the top five! This new University of Alberta team did surprise everyone in 1983, however, with an amazing third place finish in the newly added comprehensive knowledge, written Undergraduate Range Management Exam (URME)!

The 1984 SRM competition was held in Salt Lake City, Utah The team members were Jim Gray, Carolyn Slater, Isabel Simons, Adrienne Forest, Mike Gray and Tam Godfrey. They distinguished themselves with a remarkable 5th place finish in the Plant ID competition, up against students from twenty or so of all the leading range management programs at N. American Universities. During the training sessions for 1984 Jim Gray had constructed an alarm timer for me so that I didn't have to tell them when to move on during their tests, which probably helped to improve their promptness of plant

identification! 1984 was another remarkable year of Range Team achievement and further set the standard for the University of Alberta teams that would follow.

The 1985 SRM competitions were held in Rapid City, North Dakota and the team members were Jim Gray, Carolyn Slater, Isabel Simons, Robin Lagroix, and Michael Bokalo (a Forestry major). It was my last competition as Range Team Coach before I retired from the University of Alberta. This team also studied for and wrote the written URME test, for which since its inception I had been submitting suitable written exam questions for all competing teams to answer. The 1985 team achieved our highest ever placing with their first team podium result in the Plant ID competition, placing 3rd. This was a truly outstanding team performance, going from last place in 1981 to 3rd place in only 5 years of competing! It certainly gave other competing teams a sign of things to come in future years.

Mary Jane Davies 'further comments' about the facilities and coaching activities required to support the Range Team

With all the plants coming to me from the other Coaches over the years, I was able to achieve the goal of establishing a small herbarium. My problem then was where to keep it. Fortunately, in the 1970's we shared the 8th floor of the General Services Building, where Professor Bailey was located, with four Forestry Professors. One of the classrooms was used for Forestry lectures and the Forestry Professors kindly allowed me to keep two cabinets in that classroom for the Society for Range Management plant material. When we all moved in 1981 to the new AgForestry building I still only had the use of a few storage cabinets in the corner of the basement teaching classroom, but we somehow managed. Even so, I cannot emphasize enough that we had nowhere near the sample size of each species needed for a student Plant Identification training program, compared to the Universities in the US and Mexico that had all been involved in the competition for many years.

Some of those other Universities had complete multi-Professor Departments of Range Management in place, not just one single Professor with an assistant to instruct the students in all the aspects of that discipline. They also had deep infrastructure budgets for their teaching programs. We only had a small room where the students and I met after classes and worked to study and 'learn the plants'. Then I would give them timed tests similar to what they would experience at the competitions. These study sessions usually would not end until 7:30 in the evening. I cannot stress enough about the time and dedication each and every one of the students put into learning all of those plants. It must also be emphasised that in those days Range Team members did not receive any University course credits for all their work, so were involved in this demanding extra-curricular activity solely on the basis of their own self-motivation towards self-improvement. Their goal in joining the team was to improve their personal and professional skills, not to get a grade in a formal class. As Coach it was a pleasure for me to support and encourage those very worthy student goals.

I was very pleased when a course was eventually established in the Faculty to enable students doing that amount of work to receive a full University course credit for those great learning outcomes. A spinoff from this in the overall University of Alberta Range Management Major was that a much larger number of extra students nowadays enrol in that class in order to expand their Plant Identification skills. They are skills which would be needed during their range management or other careers, even if they had never joined the Range Team.

The students with whom I had the privilege of working over the years were all enthusiastic and eager to learn. It was especially satisfying to work with them in those early years of the establishment of the University of Alberta Range Plant Identification Team. Many of them went on to work in the Range Management industry or in graduate studies. I am proud to say that each and every one of them was a truly important part of my life! In addition to my duties for Professor Bailey, I also taught labs in a Forestry course to teach basic grass identification and other flora of the forest floor. I also

taught part of the Forestry Camp program at Hinton, Alberta. On weekends, I was also asked to teach basic environmental plant identification for several reclamation and chemical companies.

To conclude this 'In my own words' section it would be inappropriate if I did not acknowledge here those persons that helped me develop my own skills in plant taxonomy and plant identification. The following were very influential in widening my personal knowledge in those areas:

Mr. B. J. (Buck) Godwin, Horticulture Instructor, Olds College. He was my teaching mentor and in particular introduced me to the many intricacies and details of plant taxonomy and identification

Dr. J. L. (Lynn) Bolton, retired Agriculture Canada Forage Research Specialist. We took many plant collecting trips together. His botanical knowledge helped me to expand mine especially in the Carex and Salix genera, including many native species from Alaska. Due to his expertise we made significant additions to the herbarium

Dr. Alex Johnston, Range Management Specialist, Agriculture Canada, Lethbridge. He provided me with a wealth of knowledge of the mixed prairie. It was a privilege to learn so much from Alex

All the many farmers and ranchers who allowed me access to their property to collect plants and who shared their knowledge of the land

Coach Barry Irving writes about the roles of Range Team instructors and coaches after 1985 (with minor Briggs edits)

Barry Irving started his tenure as the sole Range Team coach in 1986 and began with a totally green team of eager students. There was a lull in the competitive abilities of the team while Barry developed study material, additional herbarium materials, and the other logistics needed. Barry's own watershed moment as Coach occurred at the 1989 competitions held in Billings, Montana when the Range Team won 3rd place on the URME and 5th place on the Plant ID contest. That was the start of a continuous string of awards that lasted throughout a 33-year career as the Coach of the University of Alberta Range Team. Barry's successes as the Range Team Coach can certainly be attributed to the full application of his comprehensively described teaching philosophy for the Range Team project and which he has shared with the reader in Appendix 3 of this TALE #6. When Barry retired in 2018, the Range Team had amassed more awards than any other N. American school in the history of the competitions, winning 6-8 team and individual awards annually. Following a two-year transition period during which time Barry mentored Lisa Raatz, Lisa then assumed the role of Range Team Coach for the 2018 competitions held in Reno, Nevada. Lisa carried on the trend of outstanding coaching and her teams have continued to win awards through 2023. Professor Art Bailey retired in 1997, capping a 30-year career, as Dr. Barry Irving evolved to be the sole instructor of the Range Team. Professor Bailey was replaced by Professor Edward Bork, who is himself a University of Alberta 1989 Range Team alumnus and SRM award winner. Edward assumed the Mattheis Chair in Rangeland Ecology (a position created to honour the donation of the Mattheis Ranch to the University of Alberta). Professor Cameron Carlyle was additionally hired in 2012 as an Assistant Professor in rangeland ecology (now Associate Professor as of 2023). Although the University of Alberta cohort of range management academic instructors has increased since Professor Bailey's time it is still a very small team of dedicated instructors (2 Professors, plus 1 teaching technologist who is also the Coach of the Range Team and does the advanced training and instruction).

The Range Team Students

The strength of the University of Alberta Range Team is in part promoted by the diversity of students who participate. In the early years the students mostly came from the Range and Pasture or Range and Wildlife program majors, with a few from Forestry and others from General Agriculture. The modern Range Team is a mix of students from a wide variety of programs. Students from Reclamation, Conservation Biology, Sustainable Agriculture, and Crop Science now commonly outnumber the students majoring in Wildlife and Range Resource Management. There have also been a

few students from outside the Faculty (including the Faculty of Science) who have been high achieving Range Team members. The oldest students have been as old as or older than the Coaches and the youngest have been 2nd year students enrolling in the course as a credit towards the advanced stages of their scheduled specialisations. There have been indigenous and First Nations students as well as international students. They each bring their own life experiences, strengths and unique perspectives to their teams. Together, that diversity has resulted in stronger and more resilient Range Teams, and their performance compared to other top schools is an indicator of the power of diversity in action.

Since its inception in 1981 hundreds of undergraduate students have participated on the Range Team (a total of 233 students as of 2023). Collectively they have won close to 200 team and individual awards over four decades. The awards speak for themselves, but they do not tell the entire story. Students who did not win awards also leave their marks in a variety of ways. Every student has helped to build the Range Team culture and the knowledge base that is now preserved in the study guides to which all students have access today. Some families and friends of former students have become short-term and long-term supporters of the travel fund for the team or range-related student awards. Former students are now often in positions of hiring and they are looking for graduates from the University of Alberta and specifically graduates who were in the Range Team. The ability to identify range plants is an important skill that is sought by many employers, as are problem solving skills and the ability to work in a team environment, all skills that students develop by being part of the Range Team. Those familiar with agricultural, range and land management in W. Canada would recognise many names of important leaders, influencers and practitioners in the industry and region if they were to review the names shown in this story of all those who had been Range Team members from 1981 to 2022. The reader can view that very long list of names in Table 3 (presented later).

After graduation, Range Team members have found their way into a diversity of careers, which is another strength of the program. Range Team alumni work in consulting, government and policy, environmental non-government organizations and private industry, and some have started their own companies. Some have gone on to graduate school and completed Master's or Doctoral degrees while some have gone into or gone back to primary agricultural production. There are at least two senior university professors (Professor Edward Bork, University of Alberta and Professor Craig Carr, Montana State University) and a few more whose careers are in academia. There are public lands agrologists and alumni in various levels of diverse government positions, from field technicians and practitioners to senior managers. Some found romance along the way. There are at least three sets of Alumni who are married, sometimes to people who were on their team and to those from different team years. There are Alumni who work or have worked in the international arena and those that graduated and then returned to their hometowns for their chosen careers. There are very many of them who competed, and they are all named in [Appendix 1](#) for the Archival record, mostly included in the annual Range Team photographs.

Range Team Awards won by the University of Alberta (1981 – 2023)

The University of Alberta Range Team has gained numerous awards and accolades over the four decades for which it has existed. This story closes with summary Tables that describe all of them. The Range Team, started by Professor Bailey in 1981 and coached by Mary Jane Davies (1981 - 1985), Barry Irving (1986 - 2018), and Lisa Raatz (2019 - 2023 cont.) is on solid ground, and future wins and awards are expected. Those who have taught, coached or participated with the Range Team give special and continuing gratitude to the generous funders of the travel endowment (John and Eleanor Cross, George Chattaway, and Harry Cornwell), who by their generosity and, with many other donors, have made all these student achievements possible.



Range Team Awards for 1981 - 2023 need a lot of cabinet space! (Photo credit: Lisa Raatz)

Table 1 on the next page describes the consistency of Range Team award wins of the team up until 2023

Please scroll down for that large Table 1....Thank you!

Table 1 Range Team Awards for the Plant ID and URME competitions of the Society for Range Management (SRM)
 (Rankings, listed by year and competition location, vs 18 to 25 competing N. American Universities
 PID = Plant Identification; URME = Undergraduate Range Management)

Range Team Awards	PID	URM		Range Team Awards	PID	URM
Year / Location	exam	exam		Year / Location	exam	exam
Mary Jane Davies, Coach						
1984 Albuquerque NM	5					
1985 Salt Lake City UT		3				
Barry Irving, Coach						
1989 Billings MT	5	3		2004 Salt Lake City UT	2	1
1990 Reno NV	9	2		2005 Fort Worth TX	2	1
1991 Washington DC	5	1		2006 Vancouver Canada	2	2
1992 Spokane WA	7	2		2007 Reno NV	2	2
1993 Albuquerque NM	3	1		2008 Louisville KY	2	1
1994 Colorado Springs CO	6	2		2009 Albuquerque NM	3	3
1995 Phoenix AZ	3	1		2010 Denver CO	3	3
1996 Wichita KS	2	3		2011 Billings MT	2	1
1997 Rapid City SD	2	2		2012 Spokane WA	2	1
1998 Guadalajara Mexico	2	3		2013 Oklahoma City OK	2	2
1999 Omaha NE	2	3		2014 Orlando FL	3	1
2000 Boise ID	2	3		2015 Sacramento CA	1	2
2001 Kona HI	1	1		2016 Corpus Christi TX	3	1
2002 Kansas City MO	4	2		2017 St. George UT	1	3
2003 Casper WY	4	2		2018 Reno NV	2	7
Lisa Raatz, Coach						
2019 Minneapolis MN	2	4				
2020 Denver CO	2	5				
2021 (Virtual due to Covid)	2	4				
2022 Albuquerque NM	3	2				
2023* Boise ID	2	3				

* Numbers competing in 2023: 21 N. American University Range Teams; Plant ID 96 students; URME 165 students

Team Awards summary, and additional awards:

68 Range Team Awards, including 14 1st place finishes during 42 years of competing

Additional awards:

1982 1st place for Student Display

2014 3rd place for the Rangeland Cup

2015 2nd place for the Rangeland Cup (4 - way tie)

Individual Team Member Awards summary (See details in Table 2)

128 Total individual team member awards (1981 - 2023)

28 Individual 1st place team member awards (1981 - 2023)

Table 2 Summary from 43 years of competing at the Society for Range Management competitions (1981 – 2023)
Frequency of SRM Individual Student Award Placings – Plant ID, URME, and Individual High Score or Combined Score

Placing	Plant ID	Undergraduate Range Management Examination	Individual High Score or Combined Score
1st	5	7	16
2nd	4	8	14
3rd	3	5	17
4th	5	11	13
5th	7	3	10
(Total)	(24)	34	70

NB Number of competing students usually >160

Table 3: Range Team Individual Undergraduate Student Awards, listed by Year (Shows all 1st to 5th place awards)

1989	Ed Bork (1st Individual High Score, All expenses trip to Washington, D.C)
1991	Brian Olson (2nd URME) Andrea Sissons (4th URME)
1992	King Campbell (3rd URME)
1993	Cody Bateman (1st URME, 1st Individual High Score, All expenses trip to Washington, D.C.) Barry Creighton (2nd URME)
1995	Candy Shkrobot (1st URME) Lisa Palmer (2nd URME) Chris Bayduza (3rd URME)
1996	Selena Cole (4th Plant ID Exam) Martin Baert (4th URME)
1997	Dayle Soppet (4th Plant ID Exam)
1998	Allana Oestrich (2nd Plant ID Exam) Sherry Hazelaar (5th Plant ID Exam) Paula Vera (2nd Individual High Score, \$500 U.S. cash award) Rob Sissons (5th Individual High Score, \$500 U.S. cash award)
1999	Carla Martin (2nd Individual High Score, \$500 U.S. cash award) Darren Brujhell (3rd Plant ID Exam, 3rd Individual High Score, \$500 U.S. cash award) Brooke Bennett (4th Individual High Score, \$500 U.S. cash award)
2000	Mae Elsinger (1st Individual High Score, All expenses trip to Washington, D.C., 4th Plant ID) Carla Martin (2nd Individual High Score, \$500 U.S. cash award) Chris Stefner (3rd Individual High Score, \$500 U.S. cash award)
2001	Mae Elsinger (1st Individual High Score, All expenses trip to Washington, D.C., 1st Plant ID, All expenses paid trip to USDA Field Office, 3rd URME) Sue Schattle (2nd Individual High Score, \$500 U.S. cash award, 5th Plant I.D.) Chris Stefner (4th Individual High Score, \$500 U.S. cash award)
2002	Brent Finnestad (2nd URME) Chris Stefner (4th Individual High Score, 4th URME)
2003	Grant Chapman (4th Individual High Score, 2nd URME)
2004	Cody Naherniak (2nd URME) Kurtis Fouquette (3rd Individual High Score)

- Steven Tannas (4th Individual High Score)
 Danielle Gabruck (5th Individual High Score, 4th URME)
- 2005 Dean Hystad (1st Individual High Score, 1st URME)
 Marilyn Germaine (2nd Individual High Score, 5th Plant ID)
 Rae Haddow (3rd Individual High Score)
- 2006 Dean Hystad (1st Individual High Score, 1st URME, 5th Plant ID)
 Brenda Shaughnessy (3rd Individual High Score)
 Darin Sherritt (5th Individual High Score)
- 2007 Tanner Pollack (1st URME)
 Brenda Shaughnessy (2nd Individual High Score)
 Darin Sherritt (3rd Individual High Score, 3rd Plant ID)
 Leah Rigney (4th Plant ID)
- 2008 Alicia Entem (1st URME, 1st Individual high Score)
 Darin Sherritt (2nd Individual High Score, 5th Plant ID)
 Tisa Bevan (3rd Individual High Score)
 Travis Lundberg (4th Individual High Score)
 Ian Levitt (4th URME)
- 2009 Tisa Bevan (2nd Individual High Score, 4th URME)
- 2010 Tanner Broadbent (3rd Individual High Score)
 Erin Belva (Tied 4th, 5th Individual High Score)
 Ashley Easton (Tied 4th, 5th Individual High Score)
- 2011 Kristine Dahl (1st Individual High Score, 4th Plant ID)
 Jolene Noble (2nd Individual High Score, 4th URME)
 Jordan Burke (2nd URME)
- 2012 Nadine Clifton (1st Individual High Score)
 Karen Anderson (2nd Plant ID, 3rd Individual High Score)
 Mark Lyseng (5th Individual High Score)
 Chelsea Geiger (5th URME)
- 2013 Carly Hansen (3rd Plant ID)
 Kat Villeneuve (5th Plant ID, 4th Individual High Score)
 Megan Lewis (3rd Individual High Score, 5th URME)
- 2014 Jeff Hogberg (2nd Individual High Score, 2nd URME)
 Leah Predy (3rd Individual High Score, 2nd Plant ID)
 Leah Rodvang (4th Individual High Score, 3rd URME)
 Megan Rennie (5th Individual High Score)
- 2015 Leah Rodvang (1st Individual High Score, 4th Plant ID, 3rd URME)
 Kassia James (2nd Individual High Score, 1st Plant ID)
 Ian Brusselers (3rd Individual High Score)
 Scott Proudfoot (4th Individual High Score)
- 2016 Sarah Thacker (1st Individual High Score, 1st URME)
 Ross Adams (2nd Individual High Score, 4th URME)
 Carol Martin (3rd Individual High Score)
 Jessica Grenke (4th Individual High Score, tie)
- 2017 Ryan James (1st Plant ID, 3rd Individual High Score)
 Kale Scarff (4th URME, 5th Individual High Score)
 Sylyanne Foo (4th Individual High Score)
- 2018 Ryan James (1st Plant ID)

- Presley Peacock (3rd Individual High Score)
 Sally Thomas (4th Individual High Score)
- 2019 Katrina Holt (1st Individual High Score)
 Rosheen Tetzlaff (3rd Individual High Score)
 Megan Johns (5th Individual High Score)
- 2020 Anabel Dombro (5th Plant ID, 1st Individual High Score)
 Rosheen Tetzlaff (2nd Individual High Score)
 Mary Villeneuve (3rd Individual High Score)
- 2021 Anabel Dombro (2nd Plant ID, 4th URME, 1st Individual High Score)
 Kayleigh Lien (5th Individual High Score)
- 2022 Katherine Johnson (1st URME, 1st Individual High Score)
 Fengxue (Riley) Zheng (5th Individual High Score)
- 2023 Jordan Perron (1st Plant ID, 1st Combined Award PID + URME)
 Kristine Ladislao (5th Plant ID, 2nd Combined Award PID + URME)
-

Range Management at the University of Alberta, Canada

Application of the ecological interactions between environment, plants, animals, other biota, and humans

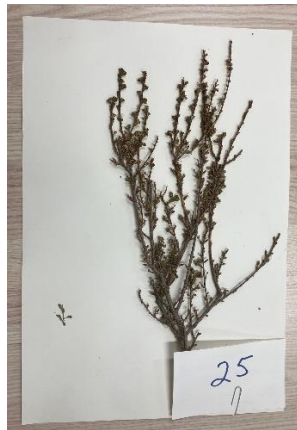
(Photo credits: University of Alberta, instructors, students and unsplash.com)



About those plants of Range Management – the collecting, plant ID and sample storing never ends!



Scenes from the 'Batcave' : The Range Team prepares for the 2023 Boise, Idaho SRM competition
Photo credits: Lisa Raatz (Plant Team Coach) and Range Team students



Appendix 1 Individual Range Team Photos (1981 – 2023 where available; Shows team member ID’s, or a names list)

Coaches: 1981 - 1985 Mary Jane Davies (MJD)
1986 - 2017 Barry Irving (BI)
2018 continuing - Lisa Raatz (LR)

1981 SRM Tulsa, Oklahoma



L - R Alan Robertson, MJD, Jan Hollingshead, Colin Stone

1982 SRM Calgary, Alberta



L – R Rob Henry, Ron Gietz, Jan Hollingshead, MJD, ‘Yellow hat’, Rhoda Norden, Craig Richardson, Lori Enns, Colin Stone

1982 SRM Calgary, Alberta (extra photo)



Back row ‘Yellow hat’ = Keith Stretch

1983 SRM Albuquerque, New Mexico



L – R Nancy Paul, Craig Richardson, Adrienne Forest, Michael Gray, MJD, Gordon Dinwoodie, Lori Enns

1984 SRM Salt Lake City, Utah



L - R Jim Gray, Michael Gray, Carolyn Slater, MJD, Isabel Simons, Tam Godfrey, Adrienne Forest

1985 SRM Rapid City South Dakota



L - R Front: Michael Bokalo, Jim Gray, Isabel Simons,
Back: Robin Lagroix, Carolyn Slater, MJD

1986 SRM Orlando, Florida



Front row: Mike Willoughby (graduate student), Dr. Art Bailey

Back row: Andrea Hanson, Robin Lagroix (co-coach), Russ Horton (graduate student), Wendy Shopik, Barry Irving (coach), Tim Reid, Alison Comack, Lena Congdon, Anne Naeth (graduate student)

1987 SRM Boise, Idaho



L – R Mike Bokalo, Alison Comack, Darrel Smith, Wendy Shopik, Lyle Badger, Leslie Zilm, Tim Reid

1988 SRM Corpus Christi, Texas (No Photograph available)

Verne Bjornson

Darren Labonte

Robert Prins

Leslie Zilm

1989 SRM Billings, Montana



L – R Bonnie Stelfox, David Vanderwell, Clara Qualizza, Barry Irving (coach), Jodie Kekula, Edward Bork, Rob Brown

1990 SRM Reno, Nevada (No photograph available)

Terry Osko	Bonnie Stelfox	Julie Priddle	Chris Nykoluk	Brian Olson
Andrea Sissons	Clara Qualizza	Rob Brown		

1991 SRM Washington, DC



Front Row: Brian Olson, Barry Irving (coach), Andrea Sissons
 Back row: Julie Priddle, Wendy Stauffer, Chris Nykoluk, Byron Johnson, Marcia Hewitt, Murray Jorgenson
 Dr. Art Bailey, Jodie Kekula

1992 SRM Spokane, Washington



L – R: Pola Genoway, Barry Irving (coach), Karen Sunquist, Darren Hayduk, Tracy Rainforth, Barry Creighton, Lisa March, Dr. Art Bailey, King Campbell

1993 SRM Albuquerque, New Mexico



Front row: Cody Bateman, Barry Creighton
Back row: Jane Thornton, Karen Milne, Christoph Weder, Barry Irving (coach), Sonya Clausen, Pola Genoway

1994 SRM Colorado Springs, Colorado



L – R: Craig Carr, Chris Bayduzza, Dr. Art Bailey, Ronda Olson, Barry Irving (coach), Sonya Clausen, Paula Schnick

1995 SRM Phoenix, Arizona



Front row: Candy Shkrobot, Barry Irving (coach), Chris Bayduzza, Lisa Palmer
Back row: Andy Lines, Selena Cole, Dr. Art Bailey, Angela Bogen, Cam lane

1996 SRM Wichita, Kansas



Front row: Jim Sicotte, Selena Cole, Martin Baert
 Back row: Omar Angeles, (assistant coach), Jana Wowk, Lois Sheerschmidt, Barry Irving (coach),
 Colin Mikkelson, Erin Dale, Dr. Art Bailey

1997 SRM Rapid City, South Dakota



L – R: Dr. Art Bailey, Dayle Soppet, Mandy Bogen, Geoff Hoar, Tiffanie Billey, Chris Stefner, Erin Dale,
 Barry Irving (coach), Shannon Smith, Robert Sissons, Christine Pitchford, Onnolee Olund

1998 SRM Guadalajara, Mexico (No photograph available)

Allana Oestrich
 Natasha Klingsh

Sherry Haazelarr
 Rob Sissons

Paula Vera
 Craig Dickrill

Tiffanie Billey

Laura Blonsky

1999 SRM Omaha, Nebraska (No photograph available)

Brooke Bennett	Laura Stepnisky	Darren Bruhjell	Carla Martin	Andrea Pollock
Brian Lambert	Tracy Kupchenko			

2000 SRM Boise, Idaho (No photograph available)

Mae Elsinger	Erin Begrand	Tracy Kupchenko	Carla Martin	Chris Stefner
Kimberly Gartner				

2001 SRM Kona, Hawaii



Kneeling: Christine Boulton, Alysia Book

Standing: Jason Machnee, Jody Metcalfe, Chris Dallyn, Amanda Joint, Barry Irving (coach), Sue Schattle, Mathew Calfat, Linda Hunt, Bret Finnestad, Mae Elsinger, Jennifer Joy, Chris Steffner

2002 SRM Kansas City, Montana (No photograph available)

Chris Stefner	Heather Fossum	Terri Mappin	Sarah Green	Grant Chapman
Brent Finnestad				

2003 SRM Casper, Wyoming



L – R: Nicole Koskie, Barry Irving (coach), Angela Pfeiffer, Grant Chapman, Danielle Gabruck, Adam Kilburn (sunglasses), Cameron Klause, Dr. Edward Bork

2004 SRM Salt Lake City, Utah (No photograph available)

Kali Hicks

Marilyn Germaine

Cameron Klause

Dannielle Gabruck

Steven Tannas

Kurtis Foquette

Cody Nahirniak

Please scroll down. Thank you !

2005 SRM Fort Worth, Texas



Kneeling: Dean Hystad

1st row standing: Brenda Shaughnessy, Rae Haddow, Marilyn Germaine, Jill Kaufmann

2nd row standing: Angela Pfeiffer, Marc Obert, Barry Irving (coach), Cody Nahirniak, Kurtis Foquette

2006 SRM Vancouver, British Columbia, Canada (No photograph available)

Brenda Shaughnessy
Kyley Gibson

Darin Sherritt

Kelty McIntyre

Tianna Magis

Dean Hystad

2007 SRM Reno, Nevada



L – R: Mae Elsinger (graduate student), Brenda Shaughnessy, Tianna Magis (standing), Tisa Bevan, Barry Irving (coach), Victoria Heidt, Leah Rigney, Erin Schnick, Travis Lundberg, Darin Sheritt, Tanner Pollack

2008 SRM Louisville, Kentucky



L – R: Mae Elsinger (graduate student), Darin Sheritt, Tennille Kupsch, Barry Irving (coach), Sally Ellis, Helene Marcoux, Tisa Bevin, Travis Lundberg, Jennifer Caudron, Ian Levitt, Alicia Entem, Dr. Edward Bork

2009 SRM Albuquerque, New Mexico



L – R: Darin Sheritt, Trevor Sheehan, Marie Pill, Barry Irving (coach), Tisa Bevan, Jennifer Caudron, Shauna Ritchie, Tennille Kupsch, Rachelle Rimmer, Robert Oakley, Dr. Edward Bork

2010 SRM Denver, Colorado



L – R: Sheena Briggs, Darin Sheritt, Barry Irving (coach), Adriane Clkark, Amanda Zapesocki, Don Kirby (SRM President 2010), Brett Pagacz, Jamie hill, Mark Hagen, Kristine Dahl, Katryna Forsch, Erin Belva (front), Kristyn Houseman, Ashley Easton, Farley Gould, Tanner Broadbent

2011 SRM Billings, Montana



L – R: Kim Kuneff, Christine Buchanan, Barry Irving (coach), Karen Anderson, Jordan Burke, Jolene Noble, Kristine Dahl

2012 SRM Spokane, Washington



L – R: Scott Dunn, Meaghan Dunn, Jamie Walker, Mark Lyseng, Karen Anderson, Carly Hansen, Nadine Clifton, Barry Irving (coach), Chelsey Geiger

2013 SRM Oklahoma City, Oklahoma (No photograph available)

Brittany Carey	Katelyn Ceh	Laurie Frerichs	Ruth Greuel	Jeff Hogberg
Megan Lewis	Leah Predy	Sean Surkan	Ashley Thorsen	Cassandra Van Ember
Katrina Villeneuve	Scott Dunn	Carly Hansen		

2014 SRM Orlando, Florida



L – R Kneeling: Zoey Zapisocki, Leah Predy, Christine Lien, Felicitas Sanders, Kassia James
 L – R Standing: Jeff Hogberg, Ian Brusselers, Barry Irving (coach), Megan Rennie, Leah Rodvang

2015 SRM Sacramento, California



L – R: Scott Proudfoot, Kassia James, Barry Irving (coach), Christine Lien, Ian Brusselers, Christine Head, Keisha Hollman, Harvey Yuen, Katelynd Howitt, Leah Rodvang

2016 SRM Corpus Christi, Texas (No photograph available)

Ross Adams	Jessica Grenke	Jessica Hryciuk	Paul Leighton	Keziah Lesko-Gosselin
Caroline Martin	Erica Schell	Stephanie Shaw	Aryn Sherritt	Sarah Thacker
Rachel Whitehouse				

2017 SRM St. George, Utah



L – R: Jessica Grenke, Kale Scarff, Ryan James, Jennifer Berry, Ashley Kocsis, Sally Thomas, Tristen Bisset, Adam Iverson, Jamie Forest, Sylyanne Foo, Barry Irving (coach), Chloe Reid, Brendan Bischoff, Shelby Buckley, Jessica Roberts

2018 SRM Sparks, Nevada



Back L – R Sally Thomas, Jennifer Weeks, a BLM Rep,
Kendra Reimert, past SRM President Larry Howery
Middle L- R Sarah Mortenson, Hanna Schoenberg, Jessica
Roberts, Presley Peacock
Front L – R Brent Rutley, Ashley Tod, Ryan James, Della
Jeffrey, Shelby Buckley

2019 SRM Minneapolis, Minnesota



Back L – R Rachael Melenka, Katrina Holt, Madison Rehm,
Jessica Roberts, Megan Johns, SRM President Dr. Barry
Irving
Front L – R Shelby Buckley, Kaitlin Holden, Rosheen Tetzlaff

2020 SRM Denver, Colorado



L – R Mary Villeneuve, Anabel Dombro, Brea Burton,
Connor Lainchbury, Hayley Webster, Kaitlin Holden,
Rosheen Tetzlaff, SRM President Dr. Clayton Marlow
(Photo by Andee Leininger)

2021 SRM Virtual (online) competition



L - R Anabel Dombro, T. Cole Christie, Kayleigh Lien and Llana Music

2022 SRM Albuquerque, New Mexico, and hybrid (online) competition



L - R Katie Thomas, Katherine Johnson, Kyleen Deering, Arvin Lim, Olivia Handel, Fengxue (Riley) Zheng
(Missing from photo: Colton Morrow; Everyone else spaced apart following Covid 19 rules!)

2023 SRM Boise, Idaho



(L-R) Dr. Karen Launchbaugh (SRM President 2022-2023), U of A Range Team: Laura Kostincer, Lauren Higginbotham, Natalya Klutz, Kristine Ladislao, Eric Natusch, Maria Mejia, Celina Waldron, Jordan McLean, Jordan Perron, and Lisa Raatz (U of A Range Team Coach)

Appendix 2: Famous and informative quotes about Learning

Apt quotes about learning enjoyed and collected by third author Briggs, each one 'sage' advice that he just could not resist inserting into this Appendix! The evidence is in that the Range Team members, although they might be unfamiliar with the wisdom offered by these particular quotes about learning, from some famous people, have gained success by applying the analyses provided by them. Very well done, Range Teams!

"Tell me and I forget, teach me and I may remember, involve me and I learn" (Benjamin Franklin)

"The more I live, the more I learn. The more I learn, the more I realize the less I know" (Michel Legrand)

"When the student is ready, the master appears" (Buddhist proverb)

"Education is the kindling of a flame, not the filling of a vessel" (Socrates)

"Unless you try to do something beyond what you have already mastered, you will never grow" (Ronald E. Osborn)

"Never stop learning, because life never stops teaching" (Unknown)

"I am always ready to learn, but I am not always ready to be taught" (Winston Churchill)

"Learning never exhausts the mind" (Leonardo da Vinci)"

"I am always doing that which I cannot do, that I may learn how to do it" (Pablo Picasso)

"Try to learn something about everything, and everything about something" (Aldous Huxley)

"Study nature, love nature, stay close to nature. It will never fail you" (Frank Lloyd Wright)

"I am still learning" (Michelangelo)

"It's what you know after you know it all that counts" (John Wooden)

"A man only learns in two ways, one by reading, and the other by association with smarter people" (Will Rogers)

"I have never met a man so ignorant that I could not learn something from him (Galileo Galilei)

"I don't love studying. I hate studying. I like learning. Learning is beautiful (Natalie Portman)

"Learning is not attained by chance, it must be sought for with ardor and attended to with diligence" (Abigail Adams)

"Learning is a treasure that will follow its owner everywhere" (Chinese proverb)

"Man's mind, when stretched by a new idea, never regains its original dimensions" (Oliver Wendell Holmes)

"Being a student is easy. Learning requires actual work" (William Crawford)

(For a few more of these check out www.brainyquote.com)

Appendix 3: In his own words “Gaining Confidence: All about Range Team Coaching”: Barry Irving’s Teaching Philosophy and Methods” (Author: 2023 Barry Irving, Faculty of ALES Alumnus)

Preparing undergraduate students for academic competitions requires an advanced level of instruction that surpasses the normal student-instructor relationship that pervades in typical undergraduate classes. Top athletes are born, but they also train and hone their skills to a razor-sharp edge. They have to keep pace with or be ahead of the other top athletes they compete against. Top range team competitors are akin to top athletes from any of the various athletic teams that Universities also support. Preparing students for the Range Team competitions required the development of a definable attitude and teaching philosophy. Barry Irving’s view was that his role as Coach was to provide students a positive and conducive learning environment that would challenge them to achieve their highest potential. Achievement on the Range Team was defined as a student putting forward their best effort. For some, this does result in winning awards but for many others it results in an individual achieving a satisfactory level of competitiveness, but one for which it is for them a satisfying level of self-accomplishment. When students are achieving by this definition they are comfortable with themselves, their instructors, and their academic development in general. They feel that they are being adequately rewarded for their efforts. Achieving students will develop to their maximum potential. A further development of this instructional philosophy was to ‘challenge yet encourage’. Barry sought to challenge every student on the Range Team to achieve. Thus, even achieving 100% on any test would not of itself be a challenge met, because if a student was still being challenged they would not be able to get a score of 100%. The instructional format should be such that it was always encouraging all the students to push themselves to do better. This is a difficult balance as testing and the interactions between the students and the Coach need to challenge the top students whilst at the same time encouraging the developing students. This delicate instructional balance requires constant evaluation and re-adjustment in terms of the difficulty of testing, so as not to discourage the developing students from putting in the necessary effort needed to significantly improve their own skills.

Providing and maintaining an environment that promotes achievement involves an understanding of the stages of learning and intellectual development. (Barry calls these ‘The Elements of Preparation’). The stages (levels) he describes are:

1. Natural ability
2. Basic learning
 - Introducing material
 - Students learn material, usually in lecture format
 - Students study material, usually only in preparation for exams
 - Students are tested on material
3. Reaction and interaction learning
 - Students review material, correct previous mistakes
 - Repeated review replaces memorization with understanding
 - Students are tested further, as the testing becomes more difficult
 - Basic concepts become routine, and students can work on developing and understanding the interactions between different basic concepts
4. Learning to anticipate
 - Students begin to develop mental toughness, which is not a natural skill. Mental toughness comes from a combination of ability, basic learning, reactive and interactive learning, and concentration. Concentration is a learned skill
5. Confidence
 - The ultimate level of preparation
 - It takes a long time to develop, and everyone has the ability to develop confidence, but few do so in an undergraduate degree because of the limited time frame

Undergraduate courses are usually finished at level 2, basic learning. Discussion, innovative teaching, interaction, and testing can challenge students to achieve levels 3, 4, and 5. Coaching students to achieve beyond basic learning is difficult, and attention to the following common pitfalls is required:

1. Tests have to challenge students yet encourage them to want to learn more. There is a fine line between challenging and discouraging students, especially in larger classes which contain a range of students with varying abilities and motivational levels
2. Tests are more than tools for evaluating students, they are also important teaching tools. Innovative testing leads to achieving students
3. Instructors who want to develop achieving students must be willing to invest time in them. Reactive and interactive learning will not occur unless the instructor is available for discussions outside of class time
4. Each group of students is different and will find achievement at a different level of difficulty. Instruction, testing, and discussions have to find the appropriate level of difficulty for each class, and ultimately for each class member
5. Achieving is hard work. When students become bored, innovation is required. The easiest solution to boredom is to make the material and testing more difficult. Boredom can also be overcome by making tests and assignments into games, by placing time limitations on mental tasks, and by having the students compete with the instructor

The overarching goal of the Coach of the University of Alberta Range Team should be to make learning fun (which includes testing, and lots of it) and by so doing to achieve the highest levels of intellectual development possible. Often this meant shocking students with difficult tests at the very beginning of the course. Students often did not like the first few tests in ENCS 407, but they adjusted to the difficult testing. They were coaxed to either adjust their own study and preparation methods (and were rewarded with the higher marks that more preparation brings) or they adjusted their expectations to a lower mark that came with their current level of preparation. Usually, they adjusted their study methods and higher marks were achieved on ever more difficult testing with the result being that they were more prepared for the eventual competition exams. This philosophy was always implemented without the students ever knowing what the coaching / learning plan was, or what the expected end results would be.

Academic competitions also require regular innovation to keep pace with the competition. The very first innovation employed by Mary Jane Davies in the early days was the rapid assembly of a teaching herbarium. Barry Irving was later able to refine that herbarium and mounted every specimen to enable rapid study by the students. Barry also created a study guide that highlighted the key features of each plant species that the students needed to learn. In the early days, the study guide consisted of labels printed on the University of Alberta mainframe computer and distributed to each student to paste onto flip cards. With the advent of more advanced personal computers, the study guide was transferred into a booklet format that was easily reproduced for each successive year. New information or tricks of the trade could quickly be added, and the study guide developed into a solid cache of detailed information as it was improved each year. Barry Irving created an URME study guide in a similar way, taking key information from range management textbooks and creating a condensed version for students. The study guide enabled students to use rapid study techniques that allowed them to adjust to more difficult testing. The study guide also enabled them to use a new learning technique called 'psychic learning'. Initially, students look at plant mounts and then learned their characteristics by viewing them directly. At an advanced stage of intellectual development, students can reverse this direction and look at written descriptions of plant species (or other cues) and visualize the characteristics. Top athletes use this method whereby they imagine real game situations and then visualize how they will react.

Psychic learning and personal visualization of outcomes was and is a key component in producing top Range Team achievers. Around 2005 the study guide was enhanced further with the development of a digital herbarium. Power-Point slides for each species were created to show the basic characteristics. A Test Generator was developed that could randomize photos so that students could create their own mini quizzes and use these as a way to study without having to be in the herbarium room. The Test Generator has pop-up comments that reinforce key characters for plant identification. Finally, the monotony of study needed to be broken up with some game playing from time to time. The combination of the written study guides, Power-Point slide sets, the Test Generator, and the method of psychic learning using visualization greatly increased the ability of students to study. They could study on the bus ride to campus or take mini-breaks from studying for other classes and study for the Range Team, without losing any time. 'Plantionary' is a game developed by Barry Irving (adapted from the Pictionary board game). To play 'Plantionary' students must know and be able to draw characteristics of plant Families, Genera, and Species for a partner who must then guess and write the correct plant name. 'Plantionary' was usually played at the end of the training program. Students were often somewhat reluctant to play, but once the game started the competition between teams to move their game pieces around the board was both intense and raucous. It was just another way of making learning fun by adding another layer of competition and a method for students to reinforce their knowledge of rangeland plants and their identification characteristics.

(NB This Appendix is a lightly edited version of the original text provided by Dr. Barry Irving to Keith Briggs in January 2023. Copyright to the content of this Appendix remains 100% with Dr. Barry Irving, the designated sole author))