

## HERITAGE LECTURE

### **F.S. Carr - Amateur Entomologist**

*The Heritage Lecture to the Entomological Society of Canada, Banff, October 9, 1990, by John L. Carr*



It is my privilege to talk to you today about my Father, F.S. Carr, an avid amateur entomologist in Alberta in the first third of this century. He specialized in beetles, but collected occasionally in other orders.

Frederick Stephen Carr was born January 1, 1881, in Cobourg, Ontario, the second of three children of a farmer, and grew up on the family farm. He received his elementary and high schooling at Cobourg. Natural history fascinated him from childhood and he was able to indulge these interests in the rural surroundings of his youth. He resolved to become a medical doctor, and undertook a premedical course at the University of Toronto, earning a B.A. degree in Natural Sciences in 1904. Finances were strained, so he went west immediately, to the Land of Opportunity, and attended Teacher Training College at Regina. He then continued West to the brand-new Province

of Alberta with his brand-new Teacher's, certificate, and taught briefly at Lacombe and then at Innisfail. There he met and courted Laura Moyer, also a school teacher from Ontario, and they were married Christmas Day 1907. He was presently appointed Principal of queens Avenue Public School in Edmonton, and transferred to the new Victoria High School there as Principal in 1910.

In 1912, with some savings and three children, he returned to the University of Toronto to further his medical studies. In 1914, ill health forced him to withdraw. After recovery, he abandoned a medical career and returned with his family to Leduc, Alberta, where he farmed. This venture was not entirely successful; my Mother claimed he would sooner follow a nice beetle than a nice plow-horse. To his and his family's great relief, he was offered and accepted the position of head of the Science Department at Victoria High School, and returned to Edmonton in 1915.

In 1920, he was appointed School Inspector at Castor, in east-central Alberta, and in 1921 became Organizer of New School Districts in the newly-settled areas east of Edmonton. In 1922, he was appointed School Inspector in the Medicine Hat District, and remained there for the rest of his life. He became ill in June, 1933. His health gradually deteriorated, and a brain tumor was diagnosed early in 1934. Surgery was unsuccessful and he died May 16, 1934.

Although Entomology was Father's avocation, he was not wholly dedicated to insects. He was a family man. He and my Mother had five children, one of whom died in infancy. The family was close-knit, and both parents took parenthood seriously. He was an enthusiastic bridge player. Reading, particularly lurid mystery novels and scientific travel books, was a great pleasure to him. He was a strong supporter of his church, and for many years served as Chairman of the Finance Committee of Fifth Avenue United Church in Medicine Hat. His garden was important, both as a source of pleasure and as a source of food for a hungry family, and his flower beds were bright and somewhat innovative. He taught Natural Science at the Teachers' Summer School in Edmonton for many summers. In the early 1930's, he was co-organizer of the Medicine Hat Regional School Musical Festival. In between, he was a Coleopterist.

Father was always fascinated by the biological world around him. One of his happy memories was of a summer spent as Student Assistant on a small-mammal biological survey party in Ontario. Hidden in various corners of his beetle room at home were boxes of rodent skulls, mollusc shells, dry sea horses, and fossils; and alcoholic bottles full of Crustacea, centipedes, scorpions, spiders and even small fish. Live toads, snakes, salamanders and horned lizards dwelt from time to time with the household.

His major interest was in the insects, and particularly the Coleoptera. At one time, he collected Lepidoptera with enthusiasm, and several Ricker-type frames of butterflies and moths hid in the back corners with the mouse skulls. A few boxes of pinned specimens remained from a brief dalliance with the Hymenoptera. He contributed quite a few flies to the Canadian National Collection, and at least one species received his name. Beetles were his overwhelming enthusiasm, however, and became the primary focus of his entomological effort. His first collections were exchanged for tuition at the University of Toronto in 1912, and he started over upon his return to Alberta in 1914.

There was no automobile in the family until he became School Inspector in 1920, so until then most of his collecting was within walking distance or street car range of his home at 110 Avenue and 123 Street in Edmonton. Thus, most of his captures in those earlier days were made on the Hudson Bay

Reserve (much of which is now occupied by Edmonton Municipal Airport) or Jasper Place or along the North Saskatchewan River, all of which were then mostly bush. He had occasional summer use of a cottage at Wabamun Lake. After 1920, his official duties took him farther afield, and his transfer to Medicine Hat opened up a whole new world for him.

His inspectorate at Medicine Hat included at various times all the area from the Saskatchewan border west to Bow Island and Alderson, and from the north slope of the Cypress Hills north to the Red Deer River, about 4,800 square miles. All the rural schools in this area had to be inspected annually, so he had opportunities to collect at many localities while travelling from school to school, and at lunch times. In those days, working hours were longer than now, but as a civil servant he had Saturday afternoons and Sundays free, and a two-week vacation in the summer. Most of his collecting was done Saturday and Sunday afternoons, within a short drive of his home, and much of that within walking distance. The valleys of the South Saskatchewan and Seven Persons Creek were favorite haunts, and since his residence was on the outskirts of the city, the prairie at his front door was an excellent and readily-exploited source of beetles. Even with the roads and cars of the 1920's Cypress Hills were within fairly easy reach in dry weather, and he made a few day-trips there each summer.

Roads and cars were not as well-developed then as now. Even short forays were not undertaken lightly. A 200-mile drive took all day, even if it didn't rain. There were no highways, a trip to anywhere meant zig-zagging over farm grid roads. The main routes, as from Medicine Hat to Calgary, were marked by colour bands painted on fence posts or telephone poles. Gravel was an exceptional luxury. Later, of course, gravelled highways were developed on the main routes, and motoring ceased to be such an adventure. These road conditions effectively restrained even holiday travel, and kept Father's horizon somewhat limited.

Father usually used his summer vacation to travel west, out of the dry prairie to the lush and faunally different Foothills and Rockies. There were several holidays spent at Banff where many treasures were caught. (National Parks tolerated collectors then.) He also made several trips to the Crowsnest Pass - Pincher Creek area, where he met the fauna that slips across the Continental Divide from British Columbia. In 1930 and again in 1931 he spent his vacation at Waterton Lakes, enjoying the pleasure and excitement of collecting the beach drift; he had a hand-written list of about 235 species of beetles collected from the wash-up. Occasionally he ventured farther afield, and even drove the goat track from Lake Louise to Golden. That road was wide enough for only one vehicle, with occasional turn-outs to meet oncoming traffic, and no impediments downwards between the edge of the road and the valley floor. About 1927, he made a collecting trip to Vancouver Island, and after he became ill in 1933 spent a long leave in Vancouver. The physical difficulties of travel in those days certainly limited his collecting opportunities, but at the same time forced him to concentrate his efforts in relatively small areas.

His collecting equipment was mostly home-made. Mother tailored the bags for his sweeping and aerial nets. His aquatic net was a large soup-strainer, sometimes modified to fit onto his sweeping net handle for increased reach. His collection was housed in a miscellany of boxes -- initially large wooden and home-made; later, commercial cardboard insect boxes; and finally when finances improved, in good commercial schmitt-type boxes, some of which he imported from England. Duplicates were kept in cotton in paper packets. He used hand lenses for most of his examinations. He had a compound microscope, from his medical student days, but this of course was very awkward, with no working space between stage and objective, and I do not think that he did any dissections at all.



Local naturalists were few, so he had little opportunity for direct contact with other entomologists. Lepidopterists Mackie and Bowman in Edmonton, and dragonfly specialist Whitehouse from Red Deer were friends, and almost certainly sometimes collecting companions. E.H. Strickland arrived in Edmonton at about the time Father left, so their contacts were mostly in the summer when Father was teaching at Summer School. In Medicine Hat, several other naturalists did visit, including P.J. Darlington Jr, Norman Criddle, William Rowan from the University of Alberta; James Pepper then collecting for the Canadian National Collection; and Owen Bryant then living in Banff.

He made up for lack of personal contact by writing letters. He corresponded vigorously with most of the leading North American Coleopterists of the day including Fall, Frost, Casey, Buchanan, Chittenden, Hatch, Ralph Hopping, Knull, Nicolay, Swaine, Brown, Brimley, Criddle, Green, Wallis and Leech. He was an enthusiastic trader, exchanging specimens with anyone who was interested. He concentrated almost exclusively on the fauna north of the Mexican border, but did have a few specimens from other parts of the world. He never sold a specimen, and only very rarely bought one. He made his material freely available to specialists, and sought out taxonomists willing to identify in exchange for duplicates. As a result, specimens from his collection are now to be found in most of the major beetle collections of North America. Many of the taxa collected by him have been described by others. Beetles bearing the "F.S. Carr" label are still frequently cited in today's revisional and faunal studies. This vigorous barter built up his own collection, which at the time of his death contained about 6,500 species, more than a quarter of the recognized North American fauna at the time. His collection was deposited with the Department of Entomology, University of Alberta, largely due to the efforts of Professor Strickland, and remains there as an important teaching and research resource.

He authored five taxonomic papers, including a revision of the genus *Brychius* in the Haliplidae. He described ten species and one subspecies of beetle as new; six of the species are considered valid. His material, however, was the basis for much taxonomic work by others. The Dytiscid genus *Carrhydrus* was erected by Fall to accommodate a single specimen which Father captured at Edmonton. Some 14 or 15 other species have been named in his honor. Many more have been described from his material.

In 1920, he published a list of 525 species of beetles from Central Alberta, mostly from Edmonton. In 1924, an addendum added a further 63 species. From 1920 to 1932 he contributed provincial records to *The Entomological Record*, mostly from Southern Alberta, adding a further 513 species to the provincial list, for a total of 1,101 species. Including species first recorded by others (often from his specimens) it is thought that his collection contained about 1,400 identified species of Beetle from Alberta.

In the Introduction to his 1920 List of the Coleoptera of Northern Alberta he wrote "...neither local lists nor provincial lists are available for any region west of Toronto". The only published records for Central Alberta at that time appear to have been 5 species of Scoletidae, recorded by Dr. Swaine. The Lepidoptera of the southern half of the province were fairly well-known through the efforts of Wolley-Dodd, Bowman and others. Whitehouse at Red Deer was studying the Odonata. The Coleoptera, however, seem to have been collected only sporadically, usually incidental to agriculture or forestry research, or by travelling naturalists passing through. The field was thus wide open for an industrious Coleopterist in the early 1920's. By the end of that decade, officers of the Dominion Department of Agriculture were contributing more, as staffs at experimental stations were enlarged.

Father was a contemporary of Wallis and Criddle in Manitoba. Amongst them, they put the

Western Interior of Canada on the entomological map. Their collections pointed to the major beetle distribution patterns of this part of the country. The importance of local collectors and collections was evident as large faunal lists were built up by these local enthusiasts. The impact of local collectors is well-shown by the number of species recorded from each of the Prairie Provinces in Bousquet's 1989 draft List of Beetles of Canada; some 31% of the beetle species known in Canada are recorded from Manitoba; 31% from Alberta, but only 21% are listed from Saskatchewan. That last province simply lacked enthusiastic local collectors until very recently.

There were four separate faunal areas in the southern half of Alberta demonstrated by my Father's work. Edmonton is largely in the Boreal Forest, with contributions from the north (*Carabus chamissonis* Fisch.) and from the west (*Scaphinotus marginatus* (Fisch.)). Records such as these occasioned some wonder even as late as the 1950's. Southeastern Alberta has a Great Plains fauna, with some elements derived from the Rocky Mountain states and the Great Basin. The northern extent of many of these forms was totally unexpected when they were first found. The Foothills and Rocky Mountains east of the Continental Divide have of course a Cordilleran fauna, with strong Boreal Forest affinities northwards. Many of the Northern forms are replaced by Pacific Slope species southwards, especially in the Crowsnest Pass area. Finally, the Cypress Hills have an isolated Cordilleran fauna. Father's collections clearly showed these patterns for the Coleoptera for the first time.

F.S. Carr's productive collecting spanned only 18 years, from 1914 to 1932. He was severely limited for the first 6 years of this period by lack of transportation, and thereafter, though less seriously, by road and vehicle limitations of the time. Without a binocular microscope he was definitely handicapped as a taxonomist. His great advantage lay in simply being there, being the right person at the right time, in the right place; and that was almost accidental because of his professional postings. However, vigor and enthusiasm led him to take full advantage of these opportunities.

It has been a source of wonder to me that he was able to accomplish so much in so short a time, while pursuing a busy professional and community life. It demanded a great deal of energy and dedication, but also reflected his eagerness to freely share specimens and ideas with other workers. He was still a young man when illness terminated his activities.

I wish to thank several people who aided in the preparation of this history. Dr. Gordon Pritchard provided the opportunity for this talk, and kindly read a draft of the paper. Dr. George Ball discussed the significance of Father's work to the science. Dr. Yves Bousquet permitted use of as yet unpublished material. My sister Mary, with a wonderful memory and an intense interest in family history, furnished most of the early information. My son Richard prepared the slide. Finally, my wife Bert patiently listened to several versions of this paper and cautiously and constructively offered helpful criticism.

Thank you all for this opportunity to pay my respects to my Father.