



**ENTOMOLOGISTS
OF
SASKATCHEWAN**



ACKNOWLEDGEMENT

I offer my sincere thanks and appreciation to:

- the **Governing Board of the Entomological Society of Canada** for encouragement in compiling these profiles and for financial support.
- the members of the **Entomological Society of Saskatchewan** for endorsing the project and aiding to offset the costs of publication.
- to the many entomologists (some retired) and to friends and acquaintances of entomologists, who gave freely of their time and talent in response to my requests for biographical information, photographs, etc.
- to **Cedric Gillott**, for supplying information on graduate students and their theses at the University of Saskatchewan; **Al Ewen**, for expediting the receipt of biographical information of many federal entomologists; **John Doane**, for obtaining many of the photographs.

Dr. Paul W. Riegert
Department of Biology
University of Regina
Regina, Saskatchewan
S4S 0A2

20 September 1990

III. Graduate Students in Biology and Entomology

1. University of Regina

The following is a list of students who graduated from the **Department of Biology**, the degree received, year of graduation, thesis title, and name of supervisor:

Bailey, Clyde G. — M.Sc., 1970. Seasonal dynamics, energy flow and feeding preferences in a population of *Encoptolophus sordidus costalis* (Scudder) (Orthoptera: Acrididae). Supervisor: P. W. Riegert.

Bellamy, Frank W. — Ph.D., 1973. Ultrastructure of the labial palp and its associated sensilla of the prairie grain wireworm *Ctenicera destructor* (Brown) (Elateridae: Coleoptera). Supervisor: R. Y. Zacharuk.

Bidochka, Michael J. — M.Sc., 1984. Genetic variation in natural populations of the migratory grasshopper, *Melanoplus sanguinipes*. Supervisor: W. Chapco.

Duke, Grant — M.Sc., 1989. Pathogenicity and histopathology of the midgut epithelium of bertha armyworm (*Mamestra configurata* (Walker)) larvae infected with *Bacillus thuringiensis*. Supervisor: R. Y. Zacharuk.

Ebizuzaki, Michael M. — M.Sc., 1973. The effects of inbreeding on egg production and hatchability in *Drosophila melanogaster*. Supervisor: W. Chapco.

Hodson, Fay R. H. — M.Sc., 1985. A study of certain quantitative traits associated with the tibia colour, femoral stripe, back colour, and lactic acid dehydrogenase polymorphisms in *Melanoplus sanguinipes* (F.). Supervisor: W. Chapco.

Jensen, Johanna C. — M.Sc., 1988. Ultrastructure of sensilla on the terminal antennal segment of the diving beetle: *Graphoderus occidentalis* Horn (Coleoptera: Dytiscidae). Supervisor: R. Y. Zacharuk.

Leung, Emily S. — Ph.D., 1990. Ultrastructure of labial palpal sensilla and associated multipolar neurons and gland cells in adult *Graphoderus occidentalis* Horn (Coleoptera: Dytiscidae). Supervisor: R. Y. Zacharuk.

McAuley, Victor J. E. — M.Sc., 1966. The histopathology of a hyphomycetous infection of four species of Elateridae (Coleoptera). Supervisor: R. Y. Zacharuk.

Ooi, Eng-choon — M.Sc., 1972. Grasshopper food preferences and related lipid composition of plants. Supervisor: P. W. Riegert.

Ooi, Shiou-Mei Linda. — M.Sc., 1972. Characterization of body fat in some grassland grasshoppers (Orthoptera: Acrididae). Supervisor: P. W. Riegert.

Scott, David A. — Ph.D., 1969. Fine structure of sensilla on the antenna of *Ctenicera destructor* (Brown) (Elateridae: Coleoptera) with specific reference to chemoreceptors. Supervisor: R. Y. Zacharuk.

Singh, Noreen. — Ph.D., 1972. Energy dynamics and feeding ecology of two grasshopper populations in a grassland ecosystem. Supervisor: P. W. Riegert.

Somers, Donald G. — M.Sc., 1971. Electrophoretic separation and comparison of some proteins in haemolymph and flight muscle extract from some Orthoptera (Acrididae). Supervisor: P. W. Riegert.

Varley, John L. — M.Sc., 1975. The effect of temperature on the efficiency of energy utilization by a non-diapause strain of the migratory grasshopper, *Melanoplus sanguinipes* (Fabricius) (Orthoptera: Acrididae). Supervisor: P. W. Riegert.

ACKNOWLEDGEMENT

I offer my sincere thanks and appreciation to:

- the **Governing Board of the Entomological Society of Canada** for encouragement in compiling these profiles and for financial support.
- the members of the **Entomological Society of Saskatchewan** for endorsing the project and aiding to offset the costs of publication.
- to the many entomologists (some retired) and to friends and acquaintances of entomologists, who gave freely of their time and talent in response to my requests for biographical information, photographs, etc.
- to **Cedric Gillott**, for supplying information on graduate students and their theses at the University of Saskatchewan; **Al Ewen**, for expediting the receipt of biographical information of many federal entomologists; **John Doane**, for obtaining many of the photographs.

Dr. Paul W. Riegert
Department of Biology
University of Regina
Regina, Saskatchewan
S4S 0A2

20 September 1990

III. Graduate Students in Biology and Entomology

1. University of Regina

The following is a list of students who graduated from the **Department of Biology**, the degree received, year of graduation, thesis title, and name of supervisor:

Bailey, Clyde G. — M.Sc., 1970. Seasonal dynamics, energy flow and feeding preferences in a population of *Encoptolophus sordidus costalis* (Scudder) (Orthoptera: Acrididae). Supervisor: P. W. Riegert.

Bellamy, Frank W. — Ph.D., 1973. Ultrastructure of the labial palp and its associated sensilla of the prairie grain wireworm *Ctenicera destructor* (Brown) (Elateridae: Coleoptera). Supervisor: R. Y. Zacharuk.

Bidochka, Michael J. — M.Sc., 1984. Genetic variation in natural populations of the migratory grasshopper, *Melanoplus sanguinipes*. Supervisor: W. Chapco.

Duke, Grant — M.Sc., 1989. Pathogenicity and histopathology of the midgut epithelium of bertha armyworm (*Mamestra configurata* (Walker)) larvae infected with *Bacillus thuringiensis*. Supervisor: R. Y. Zacharuk.

Ebizuzaki, Michael M. — M.Sc., 1973. The effects of inbreeding on egg production and hatchability in *Drosophila melanogaster*. Supervisor: W. Chapco.

Hodson, Fay R. H. — M.Sc., 1985. A study of certain quantitative traits associated with the tibia colour, femoral stripe, back colour, and lactic acid dehydrogenase polymorphisms in *Melanoplus sanguinipes* (F.). Supervisor: W. Chapco.

Jensen, Johanna C. — M.Sc., 1988. Ultrastructure of sensilla on the terminal antennal segment of the diving beetle: *Graphoderus occidentalis* Horn (Coleoptera: Dytiscidae). Supervisor: R. Y. Zacharuk.

Leung, Emily S. — Ph.D., 1990. Ultrastructure of labial palpal sensilla and associated multipolar neurons and gland cells in adult *Graphoderus occidentalis* Horn (Coleoptera: Dytiscidae). Supervisor: R. Y. Zacharuk.

McAuley, Victor J. E. — M.Sc., 1966. The histopathology of a hyphomycetous infection of four species of Elateridae (Coleoptera). Supervisor: R. Y. Zacharuk.

Ooi, Eng-choon — M.Sc., 1972. Grasshopper food preferences and related lipid composition of plants. Supervisor: P. W. Riegert.

Ooi, Shiou-Mei Linda. — M.Sc., 1972. Characterization of body fat in some grassland grasshoppers (Orthoptera: Acrididae). Supervisor: P. W. Riegert.

Scott, David A. — Ph.D., 1969. Fine structure of sensilla on the antenna of *Ctenicera destructor* (Brown) (Elateridae: Coleoptera) with specific reference to chemoreceptors. Supervisor: R. Y. Zacharuk.

Singh, Noreen. — Ph.D., 1972. Energy dynamics and feeding ecology of two grasshopper populations in a grassland ecosystem. Supervisor: P. W. Riegert.

Somers, Donald G. — M.Sc., 1971. Electrophoretic separation and comparison of some proteins in haemolymph and flight muscle extract from some Orthoptera (Acrididae). Supervisor: P. W. Riegert.

Varley, John L. — M.Sc., 1975. The effect of temperature on the efficiency of energy utilization by a non-diapause strain of the migratory grasshopper, *Melanoplus sanguinipes* (Fabricius) (Orthoptera: Acrididae). Supervisor: P. W. Riegert.

2. University of Saskatchewan

The following is a list of graduate students from various Departments, the degree received, year of graduation, thesis title, and name of supervisor:

Ahmed, Ijaz. — M.Sc., 1979. A histological, histochemical and electron microscopical study of the spermatheca of the migratory grasshopper, *Melanoplus sanguinipes* (Fab.). Supervisor: C. Gillott.

Alexander, Arden I. — M.Sc., 1987. Compatibility of picloram and the tephritid fly *Urophora cardui*, for Canada thistle (*Cirsium arvense* L.) control. Supervisor: C. Gillott.

Arnason, Arni P. — M.Sc., 1931. A morphological study of some of the immature stages of *Cryptohypnus nocturnus* (Eschscholtz) and a study of some ecological factors concerning wireworms. Supervisor: L. G. Saunders.

Arrand, John C. — M.Sc., 1952. A preliminary study of *Plagiognathus obscurus fraternus* Uhler (Miridae: Hemiptera) in relation to alfalfa seed production in northern Saskatchewan. Supervisor: J. G. Rempel.

Atkinson, Norman J. — M.Sc., 1926. A preliminary study of the biology and morphology of the red-backed cutworm (*Euxoa ochrogaster* Gn.). Supervisor: A. E. Cameron.

Berg, Virgil L. — M.Sc., 1936. The bionomics of *Systoechus vulgaris* (Diptera: Bombyliidae), a predator of grasshopper egg pods, and the external morphology of the immature stages. Supervisor: L. G. Saunders.

Bhatnagar, Rameshwar D. S. — Ph.D., 1960. The structure, function and post-embryonic development of the male and female copulatory organs of the black widow spider, *Latrodectus curacaviensis* (Muller). Supervisor: J. G. Rempel.

Bidochka, Michael J. — Ph.D., 1989. Interaction of the entomopathogenic fungus, *Beauveria bassiana*, with the migratory grasshopper, *Melanoplus sanguinipes*: A systematic study of pathogens. Supervisor: G. Khachatourians.

Braun, Lorraine. — M.Sc., 1987. The life history of *Malameba locustae* (King & Taylor) in the migratory grasshopper *Melanoplus sanguinipes* (F.). Supervisor: C. Gillott.

Burgess, Glenn D. — M.Sc., 1952. Haematophagous ectoparasites of *Citellus richardsonii richardsonii* (Sabine) (Mammalia: Sciuridae) with notes on biology, distribution and relationship to endemic diseases in southern Saskatchewan. Supervisor: J.G. Rempel.

Burgess, Lawrence. — Ph.D., 1964. The stomodaeal nervous system, neurosecretion and the gland complex in *Aedes aegypti* (L.) (Diptera: Culicidae). Supervisor: J. G. Rempel.

Byers, John R. — M.Sc., 1963. Ultrastructure of cells of the excretory system of *Tenebrio molitor* L. in relation to enzyme activity. Supervisor: M. L. Cameron.

Byers, John R. — Ph.D., 1966. Histology, histochemistry and fine structure of the cryptonephridium of *Tenebrio molitor* L. Supervisor: M. L. Cameron.

Colvin, Irene B. — M.A., 1960. Histochemical and ultrastructure studies on the excretory system of *Tenebrio molitor* (L.). Supervisor: M. L. Cameron.

Connor, William F. — M.A., 1968. Territorial relationships of the dragonfly *Libellula quadrimaculata* L. Supervisor: R. S. Miller

Couche, Graham A. — Ph.D., 1985. Accessory reproductive glands in male *Melanoplus sanguinipes* (Fabr.): structure and the influence of juvenile hormone during maturation of selected glands. Supervisor: C. Gillott.

Cumming, Margaret E. P. — M.A., 1950. A study of the pine needle scale, *Phenacaspis pinifoliae* (Fitch). Supervisors: L. G. Saunders & J. G. Rempel.

Curry, Philip S. — M.Sc., 1979. The zoogeography of mosquitoes in Saskatchewan and the adjacent Northwest Territories. Supervisor: O. W. Archibold.

Cushing, Colbert E. — Ph.D., 1961. Ecology of a lake-stream system. Supervisors: D. S. Rawson & R. S. Miller.

DeClerck, Rosemarie A. — M.Sc., 1987. Interactions between the gall midge *Cystiphora sonchi* (Bremi) and its host plant, *Sonchus arvensis* L. Supervisor: T. A. Steeves.

Dosdall, Lloyd M. — M.Sc., 1976. The stone flies (Plecoptera) of Saskatchewan. Supervisor: D. M. Lehmkuhl.

Dosdall, Lloyd M. — Ph.D., 1987. The impact of methoxychlor on aquatic insects in the Saskatchewan River system. Supervisor: D. M. Lehmkuhl.

Douglas, Cecil R. — M.Sc., 1939. The boxelder leafroller, *Graceilaria negundella* (Chambers): a study of the life history and control. Supervisor: L. G. Saunders.

Eldt, Douglas C. — Ph.D., 1955. The anatomy and histology of the full-grown larva of *Ctenicera aeripennis destructor* (Brown) (Coleoptera: Elateridae). Supervisor: J. G. Rempel.

Elliott, Robert H. — Ph.D., 1975. Factors affecting the neuro-endocrine control of oocyte maturation in the migratory grasshopper *Melanoplus sanguinipes*. (Fabr.). Supervisor: C. Gillott.

Epp, Henry T. — M.A., 1964. A study of the oviposition behaviour of the migratory grasshopper *Melanoplus bilituratus* Walker. Supervisor: R. L. Edwards.

Erlandson, Martin A. — M.Sc., 1979. The pathogenicity and infectivity of *Nosema acridophagus* Henry and *Nosema cuneatum* Henry to *Melanoplus sanguinipes* (Fabr.). Supervisor: C. Gillott.

Ewen, Alwyn B. — M.A., 1957. Contributions toward a revision of the genus *Atrichopogon* based on characters of all stages (Diptera: Heleidae). Supervisor: L. G. Saunders.

Farstad, Christian W. — M.Sc., 1935. A preliminary study of the biology of *Dichelonyx backi* (Kirby) (Scarabaeidae: Coleoptera) and the morphology of its larvae. Supervisor: L. G. Saunders.

Floate, Kevin D. — M.Sc., 1987. Effect of carabid (Coleoptera: Carabidae) predators on populations of the orange wheat blossom midge, *Sitodiplosis mosellana* (Gehin), in north-east Saskatchewan. Supervisors: C. Gillott & J. F. Doane.

Fogal, Willard H. — M.A., 1964. Cytochemical and ultrastructure studies on neurosecretory cells of *Tenebrio molitor* L. Supervisor: M. L. Cameron.

Fredeen, F. J. Hartley. — M.A., 1951. The black flies of Saskatchewan (Diptera: Simuliidae). Supervisor: J. G. Rempel.

Gerber, George H. — Ph.D., 1968. Structure, formation, histochemistry, fate and functions of the spermatophore of the caragana blister beetle, *Lytta nuttalli* Say (Coleoptera: Meloidae). Supervisor: J. G. Rempel.

Glen, Robert. — M.Sc., 1931. The external morphology of, and the characters separating the elaterid larvae of Saskatchewan. A preliminary study. Supervisor: L. G. Saunders.

- Govindarajan, Rethinasamy.** — M.Sc., 1986. Pathogenicity and infectivity of a nucleopolyhedrosis virus in *Euxoa messoria* (Harris) (Noctuidae: Lepidoptera). Supervisor: C. Gillott.
- Handford, Richard H.** — M.Sc., 1932. The biology of the peppergrass beetle, *Galeruca externa* (Say), with frequent references to the red turnip beetle, *Entomoscelis adonidis* (Pallas), and the external larval morphology of both species (Coleoptera: Chrysomelidae). Supervisor: L. G. Saunders.
- Holmberg, Robert G.** — M.Sc., 1970. The odiferous glands of some Palpatores Phalangida (Opiliones) (Arachnida). Supervisor: T. H. J. Gilmour.
- Holmgren, Lorena K.** — M. A., 1962. The metabolic behaviour of certain insect tissues with special reference to malonate and succinate metabolism. Supervisor: M. L. Cameron.
- Irwin, Robert L. B.** — M.A., 1950. The effect of p_{32} and other radiations on the physiology and genetics of *Drosophila*. Supervisors: T. J. Arnason & J. W. T. Spinks.
- Jarvis, Blair J.** — M.Sc., 1987. Phenology and drift dynamics of preimaginal Simuliidae (Diptera) in a large temperate river. Supervisor: D. M. Lehmkuhl.
- King, Kenneth M.** — M.Sc., 1926. A quantitative comparative investigation of the fauna of natural and ruderal associations at Saskatoon, with special reference to climatic influences. Supervisor: L. G. Saunders.
- Lall, Royston M.** — Ph.D., 1967. The influence of temperature and humidity on the development of *Tenebrio molitor* L. Supervisor: M. L. Cameron.
- Lance, Gilbert W.** — M.Sc., 1974. Ecological parameters influencing the distribution of *Chaoborus* species (Diptera). Supervisor: U. T. Hammer.
- Lawrence, Bonnie J.** — M.Sc., 1982. The role of chemical attraction in reproductive isolation of four species of noctuid moths. Supervisor: R. J. F. Smith.
- MacKay, Margaret R.** — M.Sc., 1938. A new genus and two new species of the Order Strepsiptera parasitic on Cicadellidae, with the life history and brief morphological study of one of the species. Supervisor: L. G. Saunders.
- Manson, George F.** — M.Sc., 1932. The external anatomy of the adult with some notes on the biology of *Cephus cinctus* (Nort.) (western wheat stem sawfly) (Hymenoptera: Cephidae). Supervisor: L. G. Saunders.
- Mason, Peter G.** — M.Sc., 1978. A biosystematic study of larval and pupal Chironomini (Diptera: Chironomidae) from the North and South Saskatchewan Rivers. Supervisor: D. M. Lehmkuhl.
- Mason, Peter G.** — Ph.D., 1983. Vols. I & II: Systematics and ecology of Chironomidae (Diptera) associated with Tobin Lake Reservoir and the Saskatchewan River. Supervisor: D. M. Lehmkuhl.
- McDonald, Howard.** — M.Sc., 1938. A preliminary study of the morphology and the taxonomic value of the external male genitalia of the Hadeninae of Saskatchewan (Lepidoptera: Phalaenidae). Supervisor: L. G. Saunders.
- McFarlane, John E.** — M.A., 1951. The morphology of the chordotonal organs of the antennae and legs of the lesser migratory grasshopper, *Melanoplus mexicanus mexicanus* Saussure. Supervisor: L. G. Saunders.
- McMahon, Harold A.** — M.Sc., 1940. Cultural methods in relation to wireworm control. Supervisor: M. J. Champlin.
- McMillan, H. Ellis.** — M.Sc., 1930. A preliminary study of the polyembryonic cutworm parasite *Berecynthus bakeri* var. *gemma* Girault. Supervisor: L. G. Saunders.

- McMillan, William D.** — M.Sc., 1971. The early succession of bottom fauna in a new reservoir, Blackstrap Lake, Saskatchewan. Supervisor: U. T. Hammer.
- Milne, Donald J.** — M.Sc., 1941. The distribution, taxonomy and life history of the Trichoptera (or caddis flies) of Waskesiu Lake. Supervisor: D.S. Rawson.
- Misra, Surendra D.** — Ph.D., 1956. Nutritional ecology of the clear-winged grasshopper, *Camnula pellucida* (Scudder) (Orthoptera: Acrididae). Supervisors: J. G. Rempel & L. G. Putnam.
- Morgan, Marlon A.** — M.Sc., 1966. The structure and function of the digestive system during postembryonic development in *Lytta nuttalli* Say. Supervisors: J. G. Rempel & N. S. Church.
- Morrill, Paul K.** — M.Sc., 1988. Disturbance of pond Chironomidae communities by deltamethrin insecticides. Supervisor: B. R. Neal.
- Olfert, Owen O.** — Ph.D., 1978. Quantitative evaluation of grasshopper defoliation of wheat in Saskatchewan. Supervisor: R. L. Randell.
- Parker, Dale W.** — M.Sc., 1985. Biosystematics of Chironomidae inhabiting selected prairie ponds in Saskatchewan. Supervisor: D. M. Lehmkuhl.
- Parker, Dale W.** — Ph.D., 1990. A study of pond-inhabiting insects: phenology and community structure. Supervisor: D. M. Lehmkuhl.
- Paul, Lorne C.** — M.Sc., 1932. The external morphology of noctuid pupae of the Canadian prairies: with notes on occurrence and habitat. Supervisor: L. G. Saunders.
- Pickford, Roy.** — M.Sc., 1951. A study of two species of grasshoppers, *Arphia conspersa* (Scudder) and *Pardalophora apiculata* (Harris) which overwinter in the nymphal stages in Saskatchewan (Orthoptera: Acrididae). Supervisor: J. G. Rempel.
- Pickford, Roy.** — Ph.D., 1971. Studies on the reproductive biology of the migratory grasshopper, *Melanoplus sanguinipes* (Fabricius) (Orthoptera: Acrididae) with particular reference to the role of the male. Supervisor: C. Gillott.
- Pressesky, Martha.** — M.A., 1952. A study of the embryonic development of the rocky mountain spotted fever tick, *Dermacentor andersoni* (Stiles) (Acarina: Ixodidae). Supervisor: J. G. Rempel.
- Rempel, Jacob G.** — M.Sc., 1931. A study of *Chironomus hyperboreus* (Staeg.) with special reference to anatomy and life history. Supervisor: D. S. Rawson.
- Rueffel, Phillip G.** — M.A., 1961. Contributions to the knowledge of the retrocerebral complex and neurosecretory cells of some mosquitoes. Supervisor: J. G. Rempel.
- Sameoto, Douglas D.** — M. A., 1964. Ecological factors controlling productivity of *Drosophila melanogaster* and *Drosophila simulans*. Supervisor: R. S. Miller.
- Sawchyn, William W.** — Ph.D., 1972. Environmental controls in the seasonal succession and synchronization of development in some pond species of damselflies (Odonata: Zygoptera). Supervisor: C. Gillott.
- Seamans, Howard L.** — M.Sc., 1933. A preliminary study of the chorion design in the micropyle area of noctuid eggs. Supervisor: L. G. Saunders.
- Shorthouse, Joseph D.** — Ph.D., 1975. The role of insect inhabitants in six *Diplolepis* (Cynipidae: Hymenoptera) rose leaf galls of western Canada. Supervisor: D. M. Lehmkuhl.
- Smith, Douglas H.** — M.Sc., 1975. Taxonomy of Saskatchewan River system Trichoptera. Supervisor: D. M. Lehmkuhl.

Smith, Douglas H. — Ph.D., 1984. Vols. I & II. Systematics of Saskatchewan Trichoptera larvae with emphasis on species from boreal streams. Supervisor: D. M. Lehmkuhl.

Steele, John E. — Ph.D., 1959. Some physiological aspects of development and growth in insects. Supervisor: M. L. Cameron.

St. Pierre, Richard — Ph.D., 1986. Energy flow in a herbivore-plant association. Supervisors: D. M. Lehmkuhl & T. A. Steeves.

Swanson, Stella M. — Ph.D., 1978. Ecology and production of macrobenthos of Waldsea Lake, Saskatchewan with emphasis on *Cricotopus ornatus* (Diptera: Chironomidae). Supervisor: U. T. Hammer.

Thompson, James S. — M.A., 1941. A study of the macroscopic bottom fauna of eight Saskatchewan lakes of varying salinities. Supervisor: D. S. Rawson.

Tones, Patricia L. — Ph.D., 1976. Factors influencing selected littoral fauna in saline lakes in Saskatchewan. Supervisor: U. T. Hammer.

Vockeroth, J. Richard — M.A., 1949. Taxonomic studies in the Tendipedidae of Mexico (Diptera: Nematocera). Supervisor: J. G. Rempel.

Weiss, Ross M. — M.Sc., 1989. Ecology of the lesser clover leaf weevil, *Hypera nigrostris* (Fab.) (Coleoptera: Curculionidae) on red clover (*Trifolium pratense* (L.)) crops in Saskatchewan. Supervisor: C. Gillott.

Wensler, Rita J. D. — M.A., 1959. The morphology of the male and female reproductive systems of the midge, *Chironomus plumosus* L. Supervisor: J. G. Rempel.

Whitehead, William F. — M. A., 1955. The musculature of the black widow spider, *Lactrodectus mactans* (Fabricius) (Araneae: Theridiidae). Supervisor: J. G. Rempel.

Whiting, Eric R. — Ph.D., 1985. Biogeography of Heptageniid mayflies in Saskatchewan: a multivariate ecological study. Supervisor: D. M. Lehmkuhl.

Williamson, Henry. — M.Sc., 1938. The biology and post-embryonic development of *Pipunculus subvirescens* and *Pipunculus unguiculatus* (Diptera: Pipunculidae) parasitoids in Cicadellidae. Supervisor: L. G. Saunders.

Yin, Chih-Ming. — Ph.D., 1972. The endocrine system and its role in caste differentiation in the lower termite, *Zootermopsis angusticollis* Hagen. Supervisor: C. Gillott.

Yin, Lucy R. — M.Sc., 1970. Sensilla of fourth instar larvae of *Aedes aegypti* (L.), and a comparison with other mosquito species. Supervisor: J. G. Rempel.

Zacharuk, Russell Y. — M.Sc., 1955. The structure, function and post-embryonic development of the reproductive system of the prairie grain wireworm *Ctenicera aeripennis destructor* (Brown). Supervisor: J. G. Rempel.

IV. PROFILES OF SASKATCHEWAN ENTOMOLOGISTS



ALLAN, Ronald Keith

Born: 15 November 1917

Morden, Manitoba

Retired: 13 November 1982

Address: 319 - 110 Street

Saskatoon, Saskatchewan

S7N 1S4

Ron received his education "en route" as his family moved from Morden to Star City, Saskatchewan, then to Fleet, Alberta; on to Clyde, Alberta, and back to Tisdale, Saskatchewan by 1934. Here he worked on the farm with his father, and as a hired hand for others, until he joined the Saskatoon Light Infantry in 1939 when World War II commenced; proceeding overseas in December 1939. After three and a half years in England and seven months in Sicily and Italy, he returned to Canada via England in 1944 and continued his service as a Battle Instructor until war's end. Although he considered the army as a career, Ron took his discharge in July 1945, worked for Canada Packers Ltd. for three years and then on army call-out until 1950. In that year, on the advice of R.B. Lowe, Ron applied for, and in December was appointed a technician in entomology at the Dominion Entomological Laboratory, Saskatoon, then headed by A.P. Arnason. He was assigned to the wireworm investigations project where he remained until retirement. He assisted in the annual surveys of wireworm damage in the province; assessment of population levels and density fluctuations; control of wireworms including chemical seed and soil treatments; life history, behaviour, dispersal, and migration studies; and larval development. Ron was a careful and dedicated worker. Much of the success of the wireworm research may be attributed to his efforts in maintaining good records, making precise determinations, and compiling accurate, repetitive observations.



ARNASON, Arni Pall

B.Sc. (1929), M.Sc. (1931) Sask.

Ph.D. (1942) Illinois

Born: 29 November 1903

Brown, Manitoba

Died: 16 October 1964

Ottawa, Ontario

Arni spent his boyhood on a farm near Mozart, Saskatchewan, attended the Normal School in Saskatoon (1923-1924) and taught in a rural school for two years. He entered the University of Saskatchewan in 1926 and obtained two degrees by 1931. He began his entomological career in 1927 as a summer student at the Dominion Entomological Laboratory, Canada Department of Agriculture, Saskatoon. He remained in its employ until 1952 when he was transferred to Ottawa as Associate Head, Field Crop Insect Unit in the Division of Entomology. While at Saskatoon he was in charge of wireworm research, investigated the dynamics of soil arthropods, chemical control of insects, radio-active tracer studies, vector control, and environmental protection; also served as Head from 1947-1952. In Ottawa he served as Head of the Field Crop Unit (1956), Head of the Crop Insects Unit (1957-1959) and as Associate Director of Programs (Entomology) in the Research Branch. Arni was a well-liked, all-round entomologist, always willing to listen and lend a helping hand. He directed research in a logical, well-defined, objective manner.



ARTHUR, Alfred Pibus
 B.S.A. (1949) McGill; M.Sc. (1951)
 Mich.; Ph.D. (1956) Ohio St.
 Born: 15 March 1924
 Knowlton, Quebec
 Retired: 14 March 1989
 Address: 2321 Albert Avenue
 Saskatoon, Saskatchewan
 S7J 1K3

Alf began collecting insects at the age of five on the family farm in south-eastern Quebec, albeit the collecting was done by smashing them between the pages of a book! However, his true entomological career started in 1947 as a summer student at the Dominion Parasite Laboratory, Belleville, Ontario; he had been an avid collector of rocks, stamps and insects for many years. He continued his employment at Belleville and described the immature stages and habits of several parasitoids of forest insect pests. He investigated parasitoid-host relationships especially the importance of associative learning and the influence of kairomones on the acceptance and oviposition responses by the pupal parasitoid, *Itopectis conquisitor*. After the closure of the Belleville laboratory in 1972, Alf transferred to Saskatoon. Here he continued his basic work on biological control of oilseed crop insects, including the use of *Bacillus thuringiensis*. His studies of the interspecific behaviour of the bertha armyworm and two of its parasitoids have led to the release of an exotic parasitoid species, *Microplitis mediator*, to enhance the biocontrol of the host. Alf has authored more than 44 refereed papers, 50 other reports and publications, and has acquired two pheromone patents. A sunflower moth, *Cochylis arthuri*, as well as its parasitoid *Bassus arthurellus*, discovered by Alf in southeastern Saskatchewan, have been named in his honour. Alf, the philatelist, has accumulated some 4,000 stamps depicting insects; 2,000 are of Lepidoptera. He served as President of the Entomological Society of Saskatchewan in 1980.



ATKINSON, Norman Jethro
 B.A. (Hons.) (1924); M.Sc. (1926) Sask.
 Died: December 1932
 Urbana, Illinois

Norman started his entomological career in April 1923 as a temporary seasonal employee at the Dominion Entomological Laboratory, Saskatoon. He was the first assistant of the re-established laboratory and helped K.M. King with investigations of the biology and control of field crop insects, especially that of cutworms. Ill health in 1924 forced him into a period of recuperation in England until April 1925. With a National Research Council bursary in hand, he returned to the University of Saskatchewan where he undertook studies of the biology and morphology of the red-backed cutworm. He was granted his Master's degree the following year. Norman accepted a Graduate Research Fellowship, tenable at the University of Illinois for the academic year 1927-1928, instead of the Caleb-Dorr Fellowship at the University of Minnesota. After several years of graduate work in Illinois, he died suddenly, thus terminating what would have been a fruitful and rewarding career in entomology. However, his initial research on the biology and control of the red-backed cutworm served as a basis for much of the future work on this insect pest.



BELLAMY, Frank William
 B.Ed. (1956), B.A. (1962) Sask.;
 B.A. (Hon.) (1968), Ph.D. (1973)
 Univ. Regina
 Born: 29 April 1929
 Lashburn, Saskatchewan
 Retired: May 1987
 Address: 3012 Grant Road
 Regina, Saskatchewan
 S4S 5G7

Frank grew up on a farm and received his elementary education in a rural, one-room school near Lloydminster, Saskatchewan. He took his Gr. IX and X by correspondence and completed his High School at Caron, Saskatchewan. After one year of Normal School (1948-1949), Frank taught in rural schools (1949-1954), in a North Battleford Elementary School (1954-1955), was Vice-Principal and teacher at Aneroid, Saskatchewan (1956-1958), teacher and Department Head at Weyburn Collegiate (1958-1969) and at Weyburn Comprehensive High School (1969-1973). He was a teacher of biology, chemistry and natural science. To improve his pedagogical skills and up-grade his science expertise, Frank took extra classes at Boston University (1963), Stanford University (1965) and completed a doctoral program at the University of Regina. His thesis research involved a study of the ultrastructure of the sense organs of wireworms. Following this he was appointed Superintendent of Education for the Borderland School Division, Rockglen, Saskatchewan (1973-1976). He then became the Associate Director of Curriculum, Saskatchewan Department of Education and Director of the Mathematics and Science Branch (1976-1987). These latter positions ensured that High School students in Saskatchewan were exposed to a maximum amount of biology, including entomology. He was awarded a Fellowship by the Canadian College of Teachers (1989). Since 1988, following his retirement, Frank has returned to teaching; this time as a classroom science teacher at Eston, Saskatchewan.



BELLAMY, Raymond Edward
 B.Sc. (1935), M.Sc. (1936), Florida;
 M.A. (1941) Mich.; Ph.D. (1947) Florida
 Born: 8 December 1912
 Worcester, Mass., U.S.A.
 Died: 7 February 1977
 Saskatoon, Saskatchewan

After completing his Master's degree program in 1936, Buck accepted a position as a science instructor at Dodd Junior College in Shreveport, La. Here he stayed for only one year, then worked as a field biologist for the Georgia Department of Public Health (1937-1942). He joined the United States Army and served in the Sanitary Corps during World War II on malaria control (1942-1945). After the war, Buck accepted a one-year appointment as an Assistant Professor at the University of Florida and then joined the U.S. Public Health Service. While there he engaged in studies of the biology, ecology, and vectoring of western equine encephalitis by mosquitoes. He joined the Belleville Research Station in 1967 where he incepted studies of mosquito development. Upon transfer to Saskatoon in 1972 he continued this work and also began investigations of the overwintering ecology of *Culex tarsalis*, the vector of western equine encephalitis. Buck published 33 scientific papers, primarily on medical entomology.



BIDOCHKA, Michael John
 B.Sc. (1981) Brock; M.Sc. (1984) U.
 Regina; Ph.D. (1989) Sask.
 Born: 17 February 1958
 St. Catharines, Ontario
 Address: Bioinsecticide Res. Lab.,
 Dept. Appl. Microbiology &
 Food Science,
 University of Saskatchewan
 Saskatoon, Saskatchewan
 S7N 0W0

Mike was brought up in Thorold, a small town on the Niagara Peninsula of Ontario. His interest in insects started when, at an early age, his father gave him an insect net made from one of his mother's stockings wrapped around a wire hoop. He started his advanced education at Brock University where his entomological interests were further bolstered when he was made temporary curator of the insect collection at Brock. Mike completed his Master's program at the University of Regina in 1984. He went on to complete his doctorate at the University of Saskatchewan with emphasis on microbial control of insects. His thesis comprised a systematic study of pathogens; the interaction of fungi and grasshoppers. This work stressed the importance of entomopathogenic fungal enzymes in grasshopper pathogenesis and defined some of the insects' immune responses. He has more than a dozen scientific papers credited to this work. Currently, Mike is employed as a Professional Research Associate at the Bioinsecticide Research Laboratory in Saskatoon. He is continuing his work with grasshopper-fungal pathogen interactions and has initiated investigations of the fungal pathogens of cereal aphids.



BRAUN, Lorraine
 B.Sc. (1973), M.Sc. (1987) Sask.
 Born: 7 June 1952
 Saskatoon, Saskatchewan
 Address: Research Station
 Agriculture Canada
 107 Science Crescent
 Saskatoon, Saskatchewan
 S7N 0X2

Lorraine developed an interest in biological flora and fauna in her early school years during outdoor activities. Her summers, while at University (1970-1973), were spent assisting R.A.A. Morrall in plant pathology research of diseases of pulse and field crops. After graduation she was appointed to a technician position at the Canada Agriculture Research Station, Saskatoon. Here she was involved with R.D. Tinline in his investigations of the biology and control of common root rot of wheat. In 1982, she joined A.B. Ewen and M.K. Mukerji in acridological research. Here she was involved in investigative studies of the efficacy of *Nosema* pathogens on the longevity, survival, and reproductive capabilities of pest grasshoppers. She participated in formulation and testing of bran baits as chemical control agents and in field spray trials of various synthetic insecticides for the control of grasshoppers. In 1988, Lorraine went to Tanzania to establish a laboratory of plant pathology to study plant diseases of wheat, and to train personnel. She returned to Saskatoon in early 1990 to resume her research on biological control of grasshoppers.



BRAUN, Murray Peter
 B.Sc. (1973) Sask.
 Born: 13 March 1951
 Humboldt, Saskatchewan
 Address: Research Station
 Agriculture Canada
 107 Science Crescent
 Saskatoon, Saskatchewan
 S7N 0X2

Murray received his first four years of education in a small country school and then attended the school in Annaheim, Saskatchewan, graduating from High School in 1969. He enrolled in a science program at the University of Saskatchewan and was fortunate to get summer employment at the Research Station in Saskatoon. Here he became involved in entomological research assisting R.H. Burrage with studies of the population dynamics, biology, and control of wireworms. After graduation he returned to the Research Station as a technician to assist M.K. Mukerji in his studies of grasshopper populations. Murray was involved in the annual grasshopper abundance surveys; the forecasting of outbreaks; formulation and assessment of bran baits; formulation, application and assessment of the efficacy of *Nosema* pathogens as biocontrol agents of grasshoppers; and the formulation and application of chemical insecticide sprays for the control of pest grasshoppers. Since 1989, Murray has been involved in the assessment of parasites and predators in the biocontrol of the Russian wheat aphid and the orange wheat blossom midge. A new coccinellid appears to be a valuable aid in the control of the aphid.



BROOKS, Arthur Robinson
 B.A. (1938) Sask.; M.Sc. (1947) Iowa St. Coll.
 Born: 31 August 1917
 Indian Head, Saskatchewan
 Died: 13 August 1962
 Saskatoon, Saskatchewan

Art began collecting insects as a boy while growing up in Abernethy, Saskatchewan where the family ran a general store. His first contact with professional entomology took place when he was hired as a seasonal assistant at the Dominion Entomological Laboratory, Saskatoon, to investigate the biology and control of field crop and garden insect pests. He favoured taxonomy and accepted a position with the Systematic Entomology Unit in Ottawa after graduating from the University in 1938. After serving ten years as a dipterist in Ottawa and publishing several extensive papers on the Tachinidae, he transferred back to Saskatoon where he headed a prairie regional laboratory of the federal Systematic Unit. Here he undertook the prodigious task of identifying the insect fauna of the Prairie Provinces. Extensive collections and studies of the taxonomy and ecology of prairie insects - root maggots, grasshoppers, Lygus bugs, wireworms - were incepted and completed. About 25,000 insect specimens were collected annually, of which 10,000 were deposited in the Canadian National Collection. Art published several monographic handbooks on the Orthoptera and Elateridae; those on Hemiptera, Odonata, Plecoptera and Trichoptera were nearing completion at the time of his death. Thorough was his motto; meticulous, his trademark.



BURGESS, Lawrence
 B.Sc. (1952) Alta.; M.Sc. (1956)
 Univ. W. Ont.; Ph.D. (1964) Sask.
 Born: 15 December 1929
 Staffordshire, England
 Retired: 29 March 1989
 Address: 19 Baldwin Crescent
 Saskatoon, Saskatchewan
 S7H 3M5

Larry spent his boyhood years on a farm near Beaverlodge, Alberta, and grew up to appreciate the wonders of nature including insects. His entomological interests were strengthened and reinforced by the lectures of E.H. Strickland at the University of Alberta. He began his entomological career in 1951 as a student assistant on the biting fly project at Churchill, Manitoba, while attached to the Household and Medical Entomology Unit of Agriculture Canada. Later he was stationed in Ottawa (1952-1957) and then in Guelph (1958-1964) where he pursued studies of the physiology and host-seeking behaviour of mosquitoes in relation to their reactions to repellents. In 1964 he was transferred to the Research Station, Saskatoon, to continue the mosquito work: their morphology and physiology, their endocrine, nervous, and neuroendocrine systems, as well as flight and responses to environmental stimuli. From 1971 until he retired, Larry has been involved in investigations of pest insects of canola. He has studied the identity, life history and overwintering habits of flea beetles and the systematics of thrips. He has established that the false chinch bug is a vector and flaxweed an alternate host plant of a yeast that infects commercial mustard crops. Larry served as Associate Head of the Entomology Section of the Research Station (1972-1981) and as President of the Entomological Society of Saskatchewan in 1966.



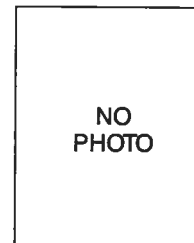
BURRAGE, Robert Harcourt F.E.S.C.
 B.S.A. (1949) O.A.C.; Ph.D. (1953) Cornell
 Born: 18 March 1920
 Davidson, Saskatchewan
 Retired: 28 July 1982
 Address: 1601 Arlington Avenue
 Saskatoon, Saskatchewan
 S7H 2Y4

Bob received his elementary education in Regina and Disley, Saskatchewan, but completed his High School in Vancouver. After serving in the R.C.A.F. (1940-1945) as a wireless operator, air gunner and pilot, he embarked on a University education in entomology at the Ontario Agricultural College in Guelph. His summers were spent on a farm in Ontario; also as a student assistant involved in spruce budworm research with the Ontario Department of Forestry, and as a research assistant working on insect pests of alsike clover for the Province of Ontario. This gave him some practical experience in economic entomology. From Guelph, Bob went directly to Cornell to commence his doctoral studies. Here also, he was employed as a research assistant and, between academic studies, did research on insect pests of field crops. After receiving some excellent training in ecology at Cornell - his thesis research was on the population dynamics of the European chafer and included the development of population sampling techniques - Bob, in 1953, was appointed to the staff of the Saskatoon Research Station. Here he initiated renewed studies of the biology, and the cultural and chemical control of wireworms in western Canada. Many of his innovative techniques in soil sampling and his studies of population dynamics have led to more effective suppression and improved control of wireworms in western Canada. Bob has also been involved in developing and implementing effective IPM strategies for flea beetle and other oilseed pest insect control. He served as President of the Entomological Society of Saskatchewan in 1954 and 1972.



CAMERON, Alfred Ernest
 B.Sc. (1909), M.A. (1911), D.Sc.
 (1915) Aberdeen; M.Sc. (1912)
 Manchester
 Born: 1887
 Aberdeen, Scotland
 Retired: 1951
 Died: 27 February 1952
 Edinburgh, Scotland

Cameron developed a keen interest in insects and in entomological research when he was a student of such notable professors as J.A. Thompson at Aberdeen; Sedgwick and Lefroy at Imperial College, and Hickson and Imms at Manchester. This interest was augmented by a visit to several entomological laboratories in the United States in 1913. In 1915 he lectured in economic zoology at both, Manchester and Cardiff Universities. A year later he was brought to Canada by C. Gordon Hewitt of the Dominion Department of Agriculture, Division of Entomology, to investigate the distribution, biology and control of pear thrips in British Columbia. He completed that assignment in 1918 and was then retained to establish the Dominion Entomological Laboratory in Saskatoon. Here, until 1921, he was involved in studies of the biology and control of horse bot flies, sugarbeet webworm, and blackflies and participated in grasshopper control campaigns. He resigned in 1920 to accept a position as Professor of Zoology in the Biology Department, University of Saskatchewan. Cameron taught histology, embryology, entomology, vertebrate zoology and parasitology to students in science and medicine until 1928. He then returned to Scotland to join the staff of the University of Edinburgh and became involved in teaching and research in forest, agricultural and medical entomology. Some of his most valuable research contributions comprised the structure, life history and bionomics of tabanids, oestrids and Scottish midges. In March 1950 he became seriously ill from a cerebral thrombosis, a condition that spelled his demise two years later.



CAMERON, Malcolm Laurence
 B.Sc. (1950), M.Sc. (1951) Dalhousie;
 Ph.D. (1953) Cambridge
 Born: 23 October 1918
 Nova Scotia
 Address: Department of Biology
 Dalhousie University
 Halifax, Nova Scotia
 B3H 4H6

Laurence's interests in biology centred on the biochemical and cytological aspects of tissues as well as the metabolism of invertebrate animals. He majored in physiology and after graduating from Cambridge he accepted a teaching-research position at the University of New Brunswick (1953-1955). This was followed by a position in the Department of Biology, University of Saskatchewan, where for the next ten years he not only taught the physiology courses but continued his research on insect hormones, enzymes, excretory processes, and the fine structure of insect tissues, particularly that of *Tenebrio molitor*. He returned to Dalhousie University in 1965 where he continued to teach and conduct research; also accepting the position of Dean of Arts & Science (1969-1977).



CHAPCO, William
 B.Sc (1963), M.A. (1965), Ph.D.
 (1967) Toronto
 Born: 22 January 1941
 Toronto, Ontario
 Address: Department of Biology
 University of Regina
 Regina, Saskatchewan
 S4S 0A2

Bill was born, raised and received all of his education in Toronto, including his University training. His early interests in science favoured mathematics and biology which he then combined in studies of genetics and applied mathematics, although he had a penchant for pure mathematics. His Master's and doctoral research comprised investigations of the inheritance of fertility in *Drosophila*; studies carried out under the guidance of Len Butler. Bill spent a year (1967-1968) as a NIH Post-doctoral Fellow at the Biometrics Unit, Plant Breeding Department of Cornell University, followed by a year (1968-1969) at the Department of Biology, San Diego University, where he taught genetics. In 1969 he joined the Department of Biology, University of Regina, where he has taught general genetics, evolution and population genetics, and biometrics. Bill's early research sustained his interest in investigations of the classical inheritance mechanisms of *Drosophila*. After spending a sabbatical year at the University of Paris in 1976, he changed the emphasis of his work to studies of the genetics of insects, particularly that of the lesser migratory grasshopper, *Melanoplus sanguinipes*. This was followed by investigations of the systematic status of the melanopline species using the molecular approach (enzyme and DNA components). Lately he has included the oedipodine grasshoppers in his studies.



CHURCH, Norman Stanley
 B.Sc. (1950) Alta.; M.Sc. (1954)
 Montana; Ph.D. (1958) Cambridge
 Born: 3 April 1929
 Stavely, Alberta
 Died: 26 July 1975
 Stavely, Alberta

Norman had a life-long interest in living organisms, even as a young lad on the farm. This interest expanded during his years at the University to include functional anatomy and structural diversity in animals. In 1950, when working at the Dominion Entomological Laboratory, Lethbridge, Alberta, he was exposed to some of the intricacies of economic entomology. His interest in insect physiology, and the encouragement of R.W. Salt and J.H. Pepper, led him to study diapause in grasshoppers and the wheat stem sawfly. At the University of Cambridge, under the tutelage of V.B. Wigglesworth, he completed studies on the heat loss of locusts during flight and the mechanism of temperature control in insects. Norman transferred to the Research Station, Saskatoon, in 1963 and changed the course and emphasis of his entomological research. He turned his attention to the morphology and embryology of blister beetles in co-operative studies with J.G. Rempel of the University of Saskatchewan, and finally to the functional morphology of reproductive structures of beetles. At the time of his death he was investigating the regulation of feeding activity cycles of wireworms. He served as Secretary of the Entomological Society of Canada (1974-1975).



CRAIG, Charles Harvey
 B.A. (1949) Sask.
 Born: 4 June 1924
 Foam Lake, Saskatchewan
 Retired: 14 January 1987
 Address: 2406 Cairns Avenue
 Saskatoon, Saskatchewan
 S7J 1V3

Harvey began his entomological career as a summer student at the Dominion Entomological Laboratory, Saskatoon, in 1949. That fall he became a permanent member of the Forage Crop Insect Section (later at the Research Station) where he remained until retirement. Initially he investigated the pollinators of legume crops: identification of Canadian bumblebees and leafcutter bees; artificial domiciling and propagation of colonies; nesting and foraging behaviour; and pollination efficiencies. In 1957, after the resignation of J.C. Arrand, Harvey was assigned to investigate the biology and control of all major insect pests of legume and grass crops in western Canada. He defined the biology of the alfalfa plant bug and the damage potential of the sweet clover weevil, screened insecticides for use on legume crops, studied use-patterns and insecticide hazard to bees, and developed integrated control programs for plant bugs. His studies of the native parasites of lygus bugs led to the importation, rearing and release of exotic parasites. Throughout all these years, Harvey was regularly involved in extension work; advising farmers, growers and seed processors of the most efficient and economical ways of controlling forage crop insects. He was honoured by the Saskatchewan Alfalfa Seed Producers Association for his research and extension contribution to the industry. Harvey served as President (1960) and Sec.-Treasurer (1958-1959) of the Entomological Society of Saskatchewan, and has been an Assistant Editor of the *Canadian Entomologist* since 1986.



CURRY, Phillip Stephen
 B.A. (1975), M.Sc. (1979) Sask.
 Born: 18 February 1950
 Jasper, Alberta
 Address: Box 1115
 Melfort, Saskatchewan
 S0E 1A0

Although Phil was born in Alberta he received his elementary and High School education in Kindersley and Outlook in Saskatchewan. The hordes of grasshoppers on his uncle's farm near Kindersley in 1961 and 1962 piqued his entomological interest. During the summer months of 1970-1973, while attending University, he operated an entomological field laboratory at Weyburn for the W.E.E. Project conducted jointly by Agriculture Canada and the Western College of Veterinary Medicine. Here he monitored mosquito populations and viral activity in mosquitoes, animals and birds that served as hosts of western equine encephalitis. This work continued in 1974-1975 when he sampled mosquito and virus activity in northern Saskatchewan and the North West Territories. Phil joined Agriculture Canada, Research Station, Melfort, Saskatchewan in 1976 to work on the management of insect pollinators (leafcutter, honey and bumble bees) for forage seed production. He was also involved in chemical and cultural control of sweet clover weevil, lygus and plant bugs, pea aphid, and brome grass seed midge. From 1975 on, he continued to work on mosquito biology and control and has acted as a mosquito control consultant to various Saskatchewan towns and cities and the Saskatchewan Department of Health. Although employed as an agrolgist by Ducks Unlimited, where he has been responsible for a variety of land and water management projects since 1982, he maintains an active interest in bees, particularly bumble bees and leafcutter bees, and is part-owner of a commercial honey bee operation.



DAVIS, Gordon Richard Fuerst
 B.Sc. (Hons.)(1948), M.Sc. (1949),
 Ph.D. (1952) McGill
 Born: 5 April 1925
 Prince Albert, Saskatchewan
 Retired: 27 February 1985
 Address: 808 - 2323 Hamilton St.
 Regina, Saskatchewan
 S4P 3Y5

Gordie (or Dick) completed his High School education in Toronto, enrolled at the University of Toronto and completed the first year of a pre-med course by 1943. This was followed by a 16-month hitch in the Canadian Navy and a resumption of University studies; this time at McGill. His summers were spent with the Biological Control Unit, Belleville, Ontario, gaining experience in the biological control of forest insect pests at Parke Reserve, Québec. In 1952 he came west, being transferred to the Dominion Entomological Laboratory, Saskatoon. His research here, for the next 33 years, dealt with many aspects of the nutrition of field crop and stored products insects. It included the fundamental aspects of the nutrition requirements of insects; the digestive enzyme systems, foods and reproduction; and protein nutritional values. He has also been involved in mycotoxin identification studies, nutritional assays, and the feeding behaviour of insects. Gordie has served as Director and Honorary Secretary-Treasurer of the Canadian Federation of Biological Societies (1973-1984), Vice-President of the Entomological Society of Saskatchewan (1960), and Director of the Entomological Society of Canada (1961). He is currently embarked on a second career; heading the translation services of a national insurance company located in Regina, Saskatchewan.



DEVLIN, Charlton George
 Born: 28 March 1913
 Cranbrook, B.C.
 Retired: 30 December 1976
 Address: 1409 Main Street East
 Saskatoon, Saskatchewan
 S7H 0L5

Although Charlie was born in British Columbia, he grew up in central Saskatchewan; receiving his education in the Conquest area. He remained on the farm until 1928, then went to work at The Pas, Manitoba, for a year before joining the work force building a hydroelectric dam at Island Falls, Saskatchewan. When the dam was completed in 1931, Charlie returned to farm near Lucky Lake, Saskatchewan. When World War I broke out, he joined the South Saskatchewan Regiment of the Canadian Army, attained the rank of Sergeant Major, participated in the Dieppe offensive in 1942 and also in the Normandy invasion of 1944. He was wounded at Dunkirk, repatriated, and after recuperative and restorative surgery was discharged on 23 January 1945. After further rehabilitation he accepted employment as a technician with the Dominion Entomological Laboratory, Saskatoon, on 1 April 1946. Here he was assigned to the investigation of the biology and control of cutworms; he remained with this project until retirement. For many years Charlie was responsible for the establishment and operation of light traps, the counting and identification of moths, population assessment, and forecasting of outbreaks of noctuous phalaenids. He participated in some of the early field trials of chemical control using chlorinated hydrocarbon insecticides, the testing of bran baits for rebacked cutworm control, surveys of abundance of noctuids, and control of rapeseed insect pests. Charlie became expert in identifying the moths of Saskatchewan; a talent that is sorely missed at the Research Station and by entomologists elsewhere in the province.



DOANE, John Frederick
 B.S.A. (1954) O.A.C.; M.Sc. (1956),
 Ph.D. (1958) Wisconsin
 Born: 14 April 1930
 Newmarket, Ontario
 Address: Research Station
 Agriculture Canada
 107 Science Cresc.
 Saskatoon, Saskatchewan
 S7N 0X2

John developed an early interest in entomology as an amateur collector of insects in southern Ontario. He enrolled at the Ontario Agricultural College and specialized in Entomology and later completed graduate studies in Entomology and Plant Pathology at the University of Wisconsin. He joined the Entomology Section of the Agriculture Canada Research Station at Saskatoon in 1958 to investigate some aspects of the ecology and behaviour of wireworms. He has investigated the oviposition behaviour and fecundity of adults, effects of soil temperature and moisture on egg survival, response of wireworm larvae to carbon dioxide, and developed methods for the trapping and monitoring of larval populations. In 1983 he initiated work on the biology and control of the wheat blossom midge in response to an outbreak of this pest. More recently he has incepted biological control research to combat the Russian wheat aphid that invaded the Province in 1988. He was appointed Head of the IPM Section of the Research Station in 1982 and in 1989, after the amalgamation of the IPM and Cereals Section, became Head of the newly formed Cereals Protection Section. John served as President of the Entomological Society of Saskatchewan in 1967 and 1978 and is currently a member of the Governing Board of the Entomological Society of Canada.



ELLIOTT, Robert Herbertson
 B.A. (1968), Dipl. Educ. (1969),
 Ph.D. (1975) Sask.
 Born: 18 November 1947
 Shaunavon, Saskatchewan
 Address: Research Station
 Agriculture Canada
 107 Science Cresc.
 Saskatoon, Saskatchewan
 S7N 0X2

Bob grew up in typical, small, prairie towns; first in Admiral, then in Unity where he completed his High School in 1965. Encouraged by his parents to seek higher education he enrolled at the University of Saskatchewan where he majored in biology and entomology. To insure some form of gainful employment, Bob also took a year of Education to qualify as a High School teacher. However, with a doctorate in hand he joined the faculty of the Department of Plant Science, University of British Columbia in 1975. His teaching responsibilities encompassed most aspects of insect physiology, pesticide toxicology, and integrated crop protection. His research involved studies of secondary plant substances, insect endocrinology, insect growth regulators, plant allelochemicals, and *Bacillus thuringiensis*. In 1983 he joined the I.P.M. Section of the Agriculture Canada Research Station, Saskatoon. Here he became involved in studies of the biology and chemical control of the wheat blossom midge which had reached epidemic proportions in 1983-1984 in north-eastern Saskatchewan. Other research was carried out on chemical control of flea beetles and influences of methods of spray application on insecticide efficacy and crop protection.



ERLANDSON, Martin Antonius
 B.Sc. (Hon.) (1976), M.Sc. (1979)
 Sask.; Ph.D. (1984) Queen's
 Born: 21 October 1953
 Outlook, Saskatchewan
 Address: Research Station
 Agriculture Canada
 107 Science Crescent
 Saskatoon, Saskatchewan
 S7N 0X2

After completing his High School studies in Outlook, Martin decided on a career in biology, one that started with an Honours degree from the University of Saskatchewan. His first interest in entomological research stemmed from work, during the summer of 1973, on the brome-grass seed midge when he was a student assistant to R.P. Knowles and C.H. Craig at C.A.R.S. in Saskatoon. His interest in biocontrol mounted, thus allowing him to complete graduate studies along with research on *Nosema* pathogens in grasshoppers. He next spent nine months of 1980 at Ohio State University studying insect cell culture and insect pathology. Martin subsequently completed doctoral studies in Kingston that included research on the temporal regulation of gene expression in the type species of Baculovirus *Autographa californica* nuclear polyhedrosis virus. Since joining the staff of the Agriculture Canada Research Station in Saskatoon in 1985, his research interests have centred on pathological relationships between viral and fungal pathogens and insect hosts including grasshoppers, bertha armyworms and black flies, as well as the molecular biology of insect viruses. Martin served as President of the Entomological Society of Saskatchewan in 1990.



EVES, Floyd Thomas
 Born: 16 October 1923
 Chatham, Ontario
 Retired: 31 October 1978
 Address: P.O. Box 95
 Vanscoy, Saskatchewan
 S0L 3K0

Floyd grew up on a farm and received his elementary and High School education in Glenham, Ontario. He continued to work on the family farm until 1941 when he joined the Winnipeg Rifles of the Canadian Army's 3rd Division. He went overseas in March 1941 and saw his first action on 'Gold Beach' in France on D-Day. He was wounded in October 1944, recovered, returned to action in Belgium where in February 1945 he was again severely wounded. He underwent five years of intensive restorative and recuperative rehabilitation before joining the Dominion Entomological Laboratory, Chatham, Ontario as a technician in 1949. Here he assisted G.F. Manson in the corn borer research program, then transferred to Saskatoon in May 1952. As a technician at the Research Station, Floyd was assigned to assist G.R.F. Davis investigate the many aspects of the nutrition of field crop and stored product insects. This included studies of the basic aspects of food components, digestive enzyme systems, and insect reproduction. He was also involved in the identification of mycotoxins in feeds, feeding behaviour of insects, and assays to determine the nutritional value of food. His competent skill in the laboratory, augmented by strict adherence to precise methodologies, contributed in large part to the success of the investigations.



EWEN, Alwyn Bradley
 B.A. (Hon.) (1954), M.A. (1957)
 (Sask.); Ph.D. (1961) Alta.
 Born: 24 October 1932
 Radisson, Saskatchewan
 Address: Research Station
 Agriculture Canada
 107 Science Cresc.
 Saskatoon, Saskatchewan
 S7N 0X2

Al received his elementary education in Saskatoon after the family moved there from Radisson in the late 1930s. He completed his High School education at Nutana Collegiate. In 1947 he began pre-medical studies but after one year opted for a career in biochemistry. However, he came under the limnological spell of D.S. Rawson, changed courses and ended with an Honours degree in biology. In the summers of 1952 and 1953 he worked with the Fisheries Research Board at Victoria Beach on Lake Winnipeg (fishing was never so good!) The following year he worked for the Saskatchewan Department of Natural Resources, Fisheries Branch, at Ile a la Cross and was exposed to northern biting flies. His Master's work under L.G. Saunders was a taxonomic study of one of the Ceratopogonidae. He joined Canada Agriculture in 1957 and was assigned investigations of the physiological mechanisms involved in environmental adaptations of immigrant pest insects. From this developed a comprehensive program on the physiological (neuro-endocrine) mechanisms involved in reproduction in the alfalfa plant bug and the migratory grasshopper. Since 1976 he has been involved in the assessment of the efficacy of insecticides formulated as dry, edible baits in grasshopper pest management and in investigating grasshopper pathogens, especially *Nosema locustae* and *Melameba locustae*. Al served as President of the Entomological Society of Saskatchewan in 1962 and as Scientific Editor of the *Canadian Entomologist* since 1986.



FREDEEN, Frederick John Hartley
 B.S.A. (1943), B.A. (1947), M.Sc.
 (1951) Sask.
 Born: 23 September 1920
 Macrorie, Saskatchewan
 Retired: 20 September 1985
 Address: 410 Leslie Ave.
 Saskatoon, Saskatchewan
 S7H 2Z1

Hartley has spent most of his research years in matching wits with the biting flies of the prairies; notably the black flies, mosquitoes, and Culicoides. He helped to pioneer chemical control methods for larviciding large rivers for black fly control and measuring environmental impact, beginning with the use of DDT in the South Saskatchewan River in 1948. Later alternative methods were sought, tested and implemented. Most of the details of life history, bionomics, and behaviour of the more than 30 species of black flies in Saskatchewan, as well as the taxonomy of the group, are credited to his efforts. Economics of outbreaks were evaluated. For about nine years he was involved with a W.H.O. project to control "river blindness" in West Africa. Hartley was in charge of the Expo 67 shadfly control project on the St. Lawrence River, 1965-1967. He is a charter member of the Entomological Society of Saskatchewan and served as President in 1961.



GADSBY, Margaret Carol
 B.Sc. (Hon.)(1978) McMaster; M.Sc.
 (1982) U.B.C.
 Born: 6 September 1955
 Hamilton, Ontario
 Address: Hoechst Canada Inc.
 Agriculture Division
 295 Henderson Drive
 Regina, Saskatchewan
 S4N 6C2

Margaret's interest in biology was enhanced in classes in entomology given by Doug Davies at McMaster University, as his summer assistant in 1976 and 1977, and as a full-time assistant in 1978-1979. Her undergraduate training comprised the taxonomy and ecology of mosquitoes and blackflies. She completed a post-graduate program under the tutelage of Bill Wellington, studying the effects of behaviour on the population dynamics of mites as predatory biological control agents. In 1983 she joined Hoechst Canada to determine the impact of insect behaviour and spray applications on the efficacy of a pyrethroid insecticide when applied under Canadian conditions. She has also been involved in improving the experimental design of pesticide tests and studying the effect of insecticide and herbicide drift. Her interests include the impact of pyrethroids and other toxic compounds on non-target aquatic insects important to nesting waterfowl and to natural systems such as soils, flora, fauna, and groundwater. Additional concerns include pesticide residues in food and the environmental ramifications of the use of pesticides in forestry. Her responsibilities range from registration of agricultural pesticides to development of computing systems for her company's Agricultural R&D Section, as well as to provide recommendations to farmers on the best use of Hoechst insecticides and herbicides.



GILKINSON, Glen Lawrie
 Born: 6 January 1924
 Pasadena, California
 Retired: 15 January 1988
 Address: Legion Manor
 203 - 2101 Preston Avenue
 Saskatoon, Saskatchewan
 S7J 4S5

The Gilkinson family left California in 1928 and settled in the Richlea area of Saskatchewan where Glen's father had purchased some farmland. Glen received his elementary education in *Acadia School*, a rural public school near Richlea, and then attended the High School in Eston, Saskatchewan. After graduating from High School he joined the army, saw action on D-Day and was wounded but not evacuated. Subsequent military action took him across France, Belgium, Holland, and Germany where, at the Leopold Canal, he was wounded again. He celebrated V. E. Day in Germany, was repatriated and discharged in Winnipeg in 1946. Glen then bought the farm at Richlea from his mother, farmed for 10 years but had to give it up because of his daughter's allergies. After moving to Saskatoon in 1956 he was a summer employee of the Entomology Section, Canada Agriculture Research Station; his first contact in professional entomology. However, he transferred to the Department of Forestry where until 1965 he worked as a technician in forest pathology. He then returned to entomology at the Research Station where he was assigned to the grasshopper investigations project, assisting P. W. Riegert, R. Pickford, and O. O. Olfert in studies of chemical control, parasite collections, rearing of cultures, annual abundance surveys, mapping, and forecasts of outbreaks. The last few years before retirement Glen was also involved in studies of the biology and control of the wheat blossom midge.



GILLOTT, Cedric
 B.Sc. (Hons.) (1962), Ph.D. (1965),
 D.Sc. (1990) Nottingham
 Born: 7 March 1940
 Sheffield, U.K.
 Address: Department of Biology
 University of Saskatchewan
 Saskatoon, Saskatchewan
 S7N 0W0

Cedric grew up in Ecclesfield, a quiet country town in South Yorkshire, completing his elementary education there and in Sheffield. He went straight to Nottingham in 1959 and completed his doctorate by 1965. He began research in entomology in 1962, studying the physiology of growth and development of *Locusta* under the guidance of K.U. Clarke. Then he looked for employment; answered an advertisement for a teaching-research position at the University of Saskatchewan and was offered a Post-doctoral Fellowship with Michael Locke at Western Reserve University in Cleveland. A firm offer from Saskatoon induced him to join the Department of Biology, University of Saskatchewan in 1965, where his research interests broadened to include reproduction (primarily in grasshoppers), caste differentiation (termites), diapause (damselflies), and most recently, pathology and biological control (grasshoppers, wheat midge, cutworms and diamond back moth). He has taught courses in insect physiology, cell physiology, and comparative endocrinology, as well as introductory biology. He is the author of an introductory entomology textbook, published in 1980. Cedric was President of the Entomological Society of Saskatchewan in 1982 and has served on the Scholarship and Nominating Committees of the Entomological Society of Canada.



GLEN, Robert O.C., F.E.S.C., F.R.S.C.
 B.Sc. (Hons.) (1929), M.Sc. (1931)
 Sask.; Ph.D. (1940) Minn.; LL.D.
 (1959) Sask.; D.Sc. (1960) Ottawa
 Born: 20 June 1905
 Paisley, Scotland
 Retired: 1972
 Address: 4523 Juniper Place
 Victoria, B.C.
 V8N 3K1

Bob grew up in rural Saskatchewan replete with country schools, baseball and horse racing. His interest in biology and initial dreams of a medical career became fixed on entomology when employed at the Dominion Entomological Laboratory, Saskatoon, during the summer of 1928. Here the work focussed on the control of grasshoppers, wireworms, cutworms and the wheat stem sawfly, emphasizing the reduction of pest populations by modifying farm practices. For sixteen years (1928-1945) Bob was involved in insect surveys, control campaigns and University teaching. His notable research involved the taxonomy and morphology of wireworms. As Research Director of Science Service (1945-1950), Dominion Entomologist (1950-1957), Associate Director of the Research Branch (1957-1962), Assistant Deputy Minister (1962-1968) he was administratively responsible for the project record system; clarification of the scope of research extension in the federal Entomology Division and later in the Research Branch; reorganization of the Division of Entomology into three from six Units; and the amalgamation of Science Service and the Experimental Farm Service to form the Research Branch. His tenure saw increased co-operation with the Provinces and the Universities, increased research grants and education leave, and the integration of entomological research in Canada. He was President of the Entomological Society of Canada in 1957 and received its Gold Medal for Achievement in 1964.



GOERZEN, David Wayne
 B.Sc. (1975) Sask.
 Born: 20 September 1953
 Saskatoon, Saskatchewan
 Address: 214 Candle Crescent
 Saskatoon, Saskatchewan
 S7K 5A4

Wayne was born and raised in Saskatoon; an interest in wildlife biology led him to study at the University of Saskatchewan. Prior to receiving his B.Sc. in Biology, he spent four summers with the National Parks of Canada and the Canadian Wildlife Service, conducting waterfowl ecology-related research throughout Saskatchewan and Manitoba. Work on projects involving identification of aquatic invertebrates related to waterfowl feeding studies aroused his interests in entomology. In late 1979, he began work in the Biology Department, University of Saskatchewan; his research focussed on leafcutter bee ecology, strain selection and elaboration of the parasite-predator complex. From 1983 to 1986, Wayne was associated with the Bioinsecticide Research Laboratory, Department of Applied Microbiology and Food Science, University of Saskatchewan and involved in biological control research on the migratory grasshopper, sunflower moth, and bertha armyworm. In 1986, he began work as a biologist/consultant to the Saskatchewan Alfalfa Seed Producers Association. Since that time, based in the Agriculture Canada Research Station, Saskatoon, he has conducted research on the mycoflora of the alfalfa leafcutter bee and has made extensive surveys of parasites and disease associated with the bee in Saskatchewan. As well, he has undertaken research to evaluate the effects of biological control agents on the leafcutter bee as a non-target organism. Wayne currently serves as Associate Editor of the Entomological Society of Saskatchewan Newsletter.



GRUSZKA, John Michael
 B.Sc. (1971) Waterloo; M.Sc. (1979) Manitoba
 Born: 29 December 1948
 Chatham, Ontario
 Address: Saskatchewan Agriculture
 Box 3003, McIntosh Mall
 800 Central Avenue
 Prince Albert, Sask.
 S6V 6G1

John was born, raised and received his primary education in Chatham, Ontario, including early experiences on his uncle's farm amid the vegetables and tobacco. He entered the University of Waterloo in 1967, undecided as to a career in engineering or biology; an interest in fisheries swung his interests to biology and resulted in a summer job (1970) at a Fisheries Research Station on the Matimak River System in eastern Quebec. After graduating from Waterloo, John and his wife spent five years in Tanzania; the first two years with CUSO working at a fisheries research and training institute. The other two and a half years were spent establishing an Apiculture and Development Centre through training, research and extension. Some of the students he taught are now in official positions with the Beekeeping Division of the Tanzanian government. He also established an apiary and increased its size from 8 colonies to 238. Returning to Canada in 1976, he enrolled in a Master's program at the University of Manitoba. In 1978 he began work with Saskatchewan Agriculture as the Assistant Apiculturist. Since mid-1979 he has been the Provincial Apiculturist of Saskatchewan, administratively responsible for the honeybee and leafcutter bee industries in the province. He has recently been involved in research at LaRonge, Saskatchewan, to determine the impact of the honey bee tracheal mite on the honey industry, and investigated the efficacy and residue of menthol when used to combat the tracheal mite in infested bee colonies. He is an alfalfa seed producer in his spare time.



HARRIS, James Lloyd
 B.S.A. (1974), M.Sc. (1980) Manitoba
 Born: 29 December 1948
 Portage la Prairie, Manitoba
 Address: Saskatchewan Agriculture
 Soils & Crop Branch
 Room 133, 3085 Albert St.
 Regina, Saskatchewan
 S4S 0B1

Lloyd received his primary education in Oakville, Manitoba and completed his secondary education in Portage la Prairie. He then worked for International Nickel in Thompson, Manitoba and for the Canadian National Railways in Winnipeg before enrolling in the Faculty of Agriculture in 1970. He became interested in entomology and by the time he graduated he had developed a commercial beekeeping enterprise comprising several hundred honey bee colonies. His interest in bees led to a graduate degree, a brief sabbatical in California with a beekeeper who produced package bees and queen bees, and a stint with Agriculture Canada in Alberta on a bee breeding program. After a year of classes in business administration in 1981, Lloyd worked with the Field Crop Section, Canada Agriculture Research Station, Winnipeg, then joined Saskatchewan Agriculture in 1982 as an extension entomologist. His primary duties have been to supply professional and technical advice, information, and opinions on the control of pest insects and other invertebrates to agricultural policy makers and extension personnel, farm organizations, agricultural producers, and the general public. Lloyd has produced extension films on the life cycle, behaviour, and control of grasshoppers, the orange wheat blossom midge, and the pale western cutworm. He is also involved in annual surveys of abundance of noxious insects affecting cereals, forage, oilseed, trees, shrubs, vegetables and small fruits in Saskatchewan. Many of his photographs of insects and the damage they cause, have appeared in publications on insect control.



HARRIS, Peter, F.E.S.C.
 B. For. (1955) U.B.C.; Ph.D. (1958)
 London; D.I.C. (1958) Imp. Coll.
 Born: 19 October 1930
 Cambridge, England
 Address: Research Station
 Agriculture Canada
 Box No. 440
 Regina, Saskatchewan
 S4P 3A2

Peter received his elementary and High School education in Reading, England. He undoubtedly gained an early interest in biology, especially in botany from his father who was a Professor of Botany at the University of Reading, U.K. He emigrated to Canada in 1950 and enrolled at the University of British Columbia, graduating in forestry five years later. In the summers during his University years, Peter worked on various entomological projects, with the Canadian Forest Service and the Biological Control Unit of Agriculture Canada at U.B.C. After the completion of his doctoral studies he joined the Parasite Research Institute, Belleville, Ontario, in 1959. Here he incepted and conducted research on the biology and ecology of several lepidopterous insects and assessed their use as natural control agents of weeds. He was Acting-Head of the Institution in 1971-1972, was in charge of its disorganization and then transferred to Regina. He has headed the investigations of bio-control of weeds at the Regina Research Station since 1972. His most notable contributions have been the control of nodding thistle and the establishment of seed-head gall flies on knapweed. He has also established insects on St. John'swort, toadflax, bull thistle, tansy ragwort, and is currently working on a control for leafy spurge and cypress spurge. Peter served as President of the Entomological Society of Saskatchewan in 1977.



HARVEY, Daniel Allen
 B.Sc. (1978) Macdonald Coll.; M.Sc. (1980) Simon Fraser
 Born: 16 November 1951
 Sarnia, Ontario
 Address: Sask. Agriculture & Food
 133 - 3085 Albert Street
 Regina, Saskatchewan
 S4S 2H2

Dan first developed an interest in entomology while studying vertebrate parasitology and environmental biology at Macdonald College in 1975. After completing his B.Sc. he enrolled in the pest management program at Simon Fraser University where, in addition to an almost exclusive curriculum in pest insects, Dan added his personal interests of vertebrate pest management and environmental studies. After spending three years as a Vector Control Biologist with the Richmond Health Department in the Vancouver area, Dan accepted the position of Pest Management Specialist with Saskatchewan Agriculture and Food. For the past six years Dan has simultaneously acted as Provincial Entomologist, Vertebrate Pest Management Specialist and Pesticides Inspector. His work includes the co-ordination of the wheat midge program and annual population surveys of several field crop insects, provincial co-ordinator of the rat eradication program and manager of the commercial pesticide applicator licensing program.



HINKS, Christopher Frederick
 B.Sc. (1964), Ph.D. (1968) London
 Born: 10 March 1939
 Cornwall, England
 Address: Research Station
 Agriculture Canada
 107 Science Cresc.
 Saskatoon, Saskatchewan
 S7N 0X2

Even as a small boy, Chris collected moths and butterflies and reared insect larvae in his home in Hayle, England. In 1952 the family moved to Perth, Western Australia. In 1955 they moved back to Somerset, England, and, after completing High School, Chris worked as a student forester until he joined the army in 1957. For the next two years he served as an infantryman, including a spell in Cyprus with the British peace-keeping forces. After his discharge in 1960, Chris enrolled in the Cornwall Technical College and completed his secondary education. At the University of London he was influenced entomologically, by O.W. Richards and R.G. Davies. Under the guidance of N. Waloff, he completed a doctoral program in which he investigated the hormonal control of flight rhythms of moths. After completing a nine-month term as a Post-doctoral Fellow at Carleton University, Ottawa, where he studied insect tissue culturing and the uptake of thymidine in plant viruses, he joined the Biosystematics Research Institute in 1968. After the re-organization of the Institute, Chris served as an insect physiologist with a group involved in experimental taxonomy. He resigned in 1978, returned to England to operate a private flower-shop nursery business, but gave that up to join the staff of the Research Station in Saskatoon in 1983. Here he has put his life-long interest in insect-plant relationships to use and is studying the resistance of cereal cultivars to insect feeding and assessing plant chemicals as grasshopper feeding repellents and toxicants.



HOOPER, Ronald Richard
 Naturalist
 Born: 28 April 1931
 Carragana, Saskatchewan
 Address: Box No. 757
 Fort Qu'Appelle, Sask.
 S0G 1S0

Ronald started to collect Lepidoptera in 1951, Coleoptera in 1953, and has been an enthusiastic collector ever since. Although he is an amateur entomologist, his expertise as a naturalist has been recognized by the Saskatchewan Museum of Natural History. He has worked there, part-time, as the museum entomologist since 1964. He has taken collecting trips to most parts of Saskatchewan, identified the specimens (or has them identified by other recognized experts) and has placed them in the scientific collection. Ronald has been primarily interested in the butterflies and beetles of Saskatchewan, in increasing the entomological acquisitions of the Museum, and in obtaining additional occurrence-records for the province. He has published a paper, *A Review of Saskatchewan Tiger Beetles* (1969); a book, *Butterflies of Saskatchewan* (1973); and a revised check-list of Saskatchewan butterflies (1986). Ronald is a minister with the Apostolic Church of Pentecost, Principal of the Full Gospel Indian Bible School in Fort Qu'Appelle and has done Christian missionary work among Canadian Indians since 1956. He served as President of the Entomological Society of Saskatchewan in 1979.



KING, Kenneth Marion
 B.Sc. (1920) Montana; M.Sc. (1926) Sask.; Ph.D. (1940) Minn.
 Born: 1 March 1896
 Virginia City, Montana
 Retired: 16 June 1956
 Address: 2560 Queenswood Drive
 Victoria, B.C.
 V8N 1X5

Ken initially wanted to be an engineer; began studies at the University of Washington in 1914, but World War I intervened. After serving in the Army he changed course and returned to Montana to complete his undergraduate work in zoology-entomology in 1920. He then spent two and a half years as an economic entomologist involved in corn earworm control with the U.S.D.A. in Charlottesville, Virginia. In 1922 he was allowed, by special Order-in-Council, to enter Canada and then accept an appointment to head the Dominion Entomological Laboratory in Saskatoon. Here he directed and supervised all research and extension work involving the biology and control of noxious field crop insects in Saskatchewan. Several periods of leave permitted him to take post graduate studies to develop his expertise in sampling and assessing population levels of arthropods. He gained his reputation as an ecologist and as a specialist on soil-inhabiting insects, particularly wireworms. Ken pioneered cultural and chemical control practices to suppress populations of wireworms, cutworms, grasshoppers, and wheat stem sawfly on the prairies. Much of his time was spent in performing extension duties; advising farmers and agriculturists of the best methods of insect control. In 1946 he was transferred to Victoria, B.C. where he established a new federal Field Crop Insect Laboratory. For the next ten years he assessed the distribution and damage caused by wireworms and root maggots in southern B.C. and evaluated control measures. Since 1958 he has served the Anglican Church as an ordained priest but is now enjoying a second retirement.



KOZIAL, John
 Dip. Agr. (1980) Sask.
 Born: 6 October 1960
 Tisdale, Saskatchewan
 Address: Box No 35
 Bjorkdale, Saskatchewan
 S0E 0E0

John is self-employed as a grain farmer near Bjorkdale, Saskatchewan, in the north-eastern sector of the province. Although he has had no formal training in entomology he has been keenly interested in insects for many years, supporting this interest with extensive entomological readings. In 1975, after a visit to the Saskatchewan Museum of Natural History in Regina, where he saw his first curated insect collection, he was so impressed with the colorful displays that he resolved to begin his own collection of insects. While at the Museum he purchased a copy of Ron Hooper's *Butterflies of Saskatchewan* - a book he still uses to identify Saskatchewan butterflies. Since 1976, John's collecting has focussed on the Lepidoptera and Coleoptera. To date he has collected nearly 100 of Saskatchewan's 144 butterfly species and about 300 species of moths. He is interested in insect distribution and occurrence - new records are reported to fellow amateurs who are engaged in updating surveys of Saskatchewan's arthropod community. In the last two years John has publically displayed his collection at local hobby shows and has been overwhelmed with the enthusiastic response of the general public. Subsequently he has been invited to visit local schools to display his collection, show slides and give talks on insects. John's entomological hobby culminated in the fulfillment of a lifelong dream, a visit to the tropical rainforest of Costa Rica in early 1990 to observe, collect, and photograph the insects in that exotic, but quickly disappearing ecosystem.



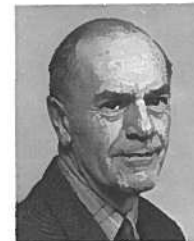
KUSTERS, Peter Martin
 B.A. (Hons.) (1977) Queen's; M.P.M.
 (1986) Simon Fraser
 Born: 30 November 1954
 Kingston, Ontario
 Address: Research Station
 Agriculture Canada
 107 Science Cresc.
 Saskatoon, Saskatchewan
 S7N 0X2

Peter grew up in Lanark, Ontario, where he also received his initial education. After finishing High School he went to Queen's University (1973-1977) and majored in geography. With no job in sight he attended Sir Sandford Fleming College, Lindsay, Ontario (1977-1979) and graduated as a Forest Technician. It was here he developed a keen interest in entomology while making his first insect collection during a course in entomology. He remained at the College for one year to teach Forest Entomology and Forest Pathology and became immersed in identifying hundreds of insect specimens collected by the students enrolled in the course. He arrived in Saskatchewan in 1981 but soon afterward was accepted into the Master of Pest Management program at Simon Fraser University. The summer of 1982 was spent with Lloyd Harris and the Saskatchewan Department of Agriculture where he gained experience in the identification and control of field crop insect pests. In 1983, Peter joined the Agriculture Canada Research Station, Saskatoon, as a research technician assisting F.J.H. Fredeen with investigations of blackflies in Saskatchewan. After Fredeen retired in 1985, Peter continued this work with P.G. Mason, but has shifted the emphasis of research to biological control, especially of canola pests.



LEHMKUHL, Dennis Merle
 B.A. (1964), M.A. (1966) Univ.
 Montana; Ph.D. (1969) Oregon St.
 Born: 22 August 1942
 Pierre, South Dakota
 Address: Department of Biology
 University of Saskatchewan
 Saskatoon, Saskatchewan
 S7N 0W0

Dennis was born and raised on a farm in the northern Great Plains where he, early in life, became familiar with gophers, buckbrush, and all the other flora and fauna of the prairies. After completing his elementary and High School education in Pierre, S.D., he pursued higher education in biology at Montana State University, Missoula. Here, he met the hemipterist, R. Froshner, whose work steered Dennis onto an entomological path. Interim work at Flathead Lake, Montana, during the summers of 1961 and 1962, and on-the-job experience as a Teaching Assistant in 1963-1964, further stimulated his interests in insects. After completing a Master's program (zoology major and botany minor) in 1966, he proceeded to Oregon State to undertake and complete his doctorate, guided by N.H. Anderson. His thesis research on the ecology of stream-inhabiting insects, set the stage for all subsequent entomological investigations. After joining the staff of the Biology Department, University of Saskatchewan in 1969, Dennis has continued his involvement with aquatic insects, both in his research and in his academic classroom lectures. He has taught classes in economic entomology, aquatic biology, animal physiology, insect systematics, and ecology. He has published 20 technical reports and book chapters, and more than 40 scientific papers dealing with the diversity, distribution, systematics, and ecology of stream insects in western Canada, notably the stoneflies, caddisflies, mayflies, and chironomids. Dennis served as President of the Entomological Society of Saskatchewan in 1971.



LOWE, Reuben Baldwin
 Born: 24 October 1907
 Stockport, England
 Retired: 24 October 1972
 Died: 1 February 1986
 Saskatoon, Saskatchewan

The Lowe family emigrated to Saskatoon, Saskatchewan in 1911 where Reuben's father found employment with the Canadian National Railway. Reuben received his elementary education in King George School, and his High School in Nutana and Bedford Road Collegiates. He then studied music and taught it. During the Depression music education declined generally so he worked for a photography studio, and later, a furniture store to augment his income. He was a member of the Saskatoon Musical Arts Club where he met K.M. King who gave him some additional part-time work in entomology at the Dominion Entomological Laboratory. In 1940 he joined the R.C.A.F. where he received training as a navigation-wireless operator. A prolonged bout with rheumatic fever kept him from active service overseas but enabled him to remain on duty as an instructor in Canada. After his discharge from the Air Force on 31 July 1945, Reuben accepted an appointment as a technician at the Dominion Entomological Laboratory, Saskatoon, on 1 September 1945. From then until retirement he was involved in the entomological investigations of the biology and control of cutworms. This included annual abundance surveys; damage assessments; rearings and life history studies; formulation and application of poison baits; field applications of chemicals for cutworm control; and investigations of parasites and predators of cutworms. In addition to his many entomological activities, Reuben was constantly in demand to construct and maintain electric and electronic equipment. He was an accomplished pianist, an excellent photographer, and modern car buff.



LYNN, Carl Eric
 B.S.A. (1974) Sask.
 Born: 16 April 1951
 Hanna, Alberta
 Address: Research Station
 Agriculture Canada
 107 Science Cresc.
 Saskatoon, Saskatchewan
 S7N 0X2

Carl was raised on a farm near Castor, Alberta. He attended the elementary school there and later completed his High School education in Wetaskiwin. When the family moved to Saskatoon in 1970, Carl enrolled at the University of Saskatchewan, planning a career in horticulture. His interests changed and he graduated with majors in plant science and economics. He then began his working career by accepting employment, in 1974, with the Saskatchewan Department of Agriculture as a Pesticides Safety Specialist. This work, supervised by C.C. Peters, and a four-month course in pesticides at Olds College, introduced him to entomology and economic insect pests. His duties included the drafting of legislation and licensing of commercial pesticide applicators. He worked as the Agricultural Resources Commentator on the Radio Noon Show for C.B.C. Radio, Regina (1980-1981), then joined the Research Station in Saskatoon as the Information Officer. In this capacity he responds to inquiries from the general public concerning a wide range of insect-related problems in Saskatchewan, issues news releases of pertinent and significant research results, compiles a bi-weekly newsletter, and assists in organizing farm shows and exhibitions. Carl is also involved in organizing and conducting the annual grasshopper abundance survey schools in the Province of Saskatchewan.



MAKOWSKI, Roberte Marie Denise
 (nee Boyle)
 B.Sc. (Hons.)(1977), M. Sc. (1981)
 Univ. Ottawa; Ph.D. (1987) Sask.
 Born: 23 October 1955
 Winnipeg, Manitoba
 Address: Agriculture Canada
 Research Station
 P.O. Box 440
 Regina, Saskatchewan
 S4P 3A2

Roberte was born to travel. Because the family moved often her education was broadened (all her elementary and secondary schooling was in the French language) by attending schools in Toronto, Montreal, Ottawa and Quebec City. Being a nature enthusiast she excelled in outdoor activities and summer camps while maintaining her curiosity in science. This directed her career towards biology with specific interests in aquatic ecology. After completing her Bachelor's program, in which she investigated fish and their food in the Ottawa River, she gained further biological experience by working on fish morphology (Museum of Canada) and by active participation in underwater archeology investigating sunken ships wrecked in 1570s and 1690s (Parks Canada). Her Master's research comprised studies of the abundance and significance of, and competition between, the more than 100 species of insects involved in pollination of apple trees in the Vineland region of Ontario. Roberte joined Agriculture Canada in 1981 in Ottawa where she assisted in biocontrol operations, importations, and servicing of parasite shipments destined for release in Canada. She left Ottawa in 1983 on a leave-training program to undertake and complete her doctoral studies in Saskatchewan while remaining attached to the Research Station in Regina. She has investigated and evaluated round-leaved mallow as a field crop weed and is currently engaged in completing the registration and regulatory requirements recognizing a fungus as a specific biological herbicide.



MARTIN, William Kenneth
 Born: 9 January 1931
 Eatonia, Saskatchewan
 Address: Research Station
 Agriculture Canada
 107 Science Crescent
 Saskatoon, Saskatchewan
 S7N 0X2

Bill was raised on a farm south of Laporte, Saskatchewan and attended *High-berry School #1053*, a one-room country school for Grades 1-8. After his father's death in 1943 the family moved to Saskatoon where he completed his Grade 8 at Buena Vista School and his High School at Nutana Collegiate. He had a few odd jobs after graduation and then moved back to the farm at Laporte for three years. He returned to Saskatoon in 1956 and worked as a salesman for a finance company for four years. In June 1962, Bill obtained a technician appointment at the Research Station in Saskatoon. Here he assisted R.Y. Zacharuk and R.H. Burrage in various investigations of the morphology and biology of wireworms. In 1964 he aided F.J.H. Fredeen in studies of the taxonomy, dispersal, and control of blackflies. From November 1965 to 1982, he was involved in laboratory work in toxicology with K.S. McKinlay, examining the production of various droplet sizes of insecticides, determining the efficacy of chemicals on pest insects, and making baseline measurements of insecticide potency. When McKinlay retired in 1982, Bill joined C.F. Hinks and O.O. Olfert in their work with plant resistance to insect attack. To date some promising cultivars of wheat have been identified as being resistant to grasshopper injury.



MASON, Peter George
 B.Sc. (1975) Guelph, M.Sc. (1978),
 Ph.D. (1983) Sask.
 Born: 9 November 1952
 Niagara Falls, Ontario
 Address: Research Station
 Agriculture Canada
 107 Science Cresc.
 Saskatoon, Saskatchewan
 S7N 0X2

Peter was raised in the urban setting of Mississauga, obtained his elementary and High School education in that centre and showed an early leaning towards the natural sciences. When he enrolled at the University of Guelph to further his education he was introduced to entomology by the infectious enthusiasm of D.H. Pengelly and R.E. Roughley. Working for Pengelly as a summer student and collecting insects for classroom use, further increased his interest in insects. Peter came to Saskatchewan to continue graduate studies and initiated research of the systematics and ecology of Chironomidae in the Saskatchewan River. After completing that work in 1983, he joined the staff of the Canada Agriculture Research Station, Saskatoon, commencing work with A.P. Arthur on biocontrol of insect pests of oilseed crops. At least four scientific papers, detailing the life histories of hymenopterous parasites of bertha armyworm and sunflower pests, attest to the success of these investigations. In 1985, he was on hand to experience an intense outbreak of blackflies (*S. luggeri*). This set the stage for current work on the ecology and control of black flies in Saskatchewan, especially the abatement and repelling of adult populations. Experimentation on, and evaluation of the biocontrol potential of *B. thuringiensis*, assessment of manipulating water levels as a means of controlling larval populations, and investigating the population dynamics of adult flies using silhouette traps, is continuing. Peter served as President of the Entomological Society of Saskatchewan in 1985-1986.



MATHESON, Mary Marlene
 B.Sc. (1984), M.Sc. (1988) McGill
 Born: 21 May 1961
 Souris, P.E.I.
 Address: Agriculture Canada
 Research Station
 107 Science Crescent
 Saskatoon, Saskatchewan
 S7N 0X2

Mary was raised on a farm near, and received her early education in Souris, Prince Edward Island. Her agricultural background and interest in biology led her to study at the Nova Scotia Agricultural College, Truro, N.S. She spent four summers working for Agriculture Canada, Charlottetown, P.E.I. and it was through her summer employment that she became interested in entomology. Mary decided to change the major thrust of her studies from plant science to entomology; she graduated with a major in that discipline from Macdonald College in 1984. Her interest in biological control of pest insects, especially biting flies, led to graduate studies and thesis research on the insect complex associated with cattle dung. In 1987, Mary and her husband moved to Saskatoon, where the latter pursued post graduate studies at the University of Saskatchewan. In January 1988, she began work with Canada Agriculture, Saskatoon, as a research technician. Here she is involved in a variety of research activities related to the resistance of cereal cultivars to grasshopper damage and in studies of the biological control of the Russian wheat aphid. Mary is currently the Associate Editor of the Entomological Society of Saskatchewan Newsletter.



MAW, Murray Glen
 B.Sc. (1951) Western; B.Sc. (1954)
 Oxford; M.Sc. (1961) Queen's
 Born: 5 August 1925
 McKay's Corners, Ontario
 Retired: 30 January 1987
 Address: 6 Newton Crescent
 Regina, Saskatchewan
 S4S 2V8

Murray grew up on a farm near Chatham where he was quickly introduced to the myriad flora and fauna of rural Ontario. After completing High School he joined the Canadian Army and served overseas in Belgium, Holland and Germany in a combat role as well as in the Occupation Forces. After his discharge in 1946, Murray enrolled in the pre-medicine program at the University of Western Ontario but after two years he transferred to Honours Biology and graduated with majors in embryology and histology (Entomology Option). He worked as a student assistant at the Dominion Parasite Laboratory, Belleville, in the summer 1950 and returned to full-time employment in 1951 after graduating from U.W.O. At Belleville, Murray was engaged in the mass rearing of native parasites of spruce budworm, pine shoot moth, larch sawfly, and spruce sawfly; these for late release in various parts of the Dominion. He spent some time studying the life history of various dipterous parasites including the biology of the pine shoot moth which he investigated in England. After his return to Canada in 1954 he investigated the responses of insects to atmospheric stimuli (mainly electrical) and to the chemosterilization and autocidal control of mosquitoes. He transferred to the Regina Research Station in 1972 where, as a member of the research team investigating the biological control of weeds, he conducted surveys of the insect fauna present on the weeds targeted for biocontrol in Canada. Murray has also been involved in studies of the economic losses by weeds. He served as President of the Entomological Society of Saskatchewan in 1975.



McDONALD, Howard
 B.S.A. (1935), M.Sc. (1938) Sask.;
 Ph.D. (1947) Ohio St.
 Born: 23 February 1911
 Glenside, Saskatchewan
 Retired: 16 June 1972
 Address: 539 - East 7th Street
 North Vancouver, B.C.
 V7L 1S7

Howard grew up on a farm near Glenside, Saskatchewan and directed his ambitions towards a career in agriculture. After obtaining a diploma in agriculture he worked as a summer student at the Dominion Entomological Laboratory, Saskatoon, beginning in 1933. Here he got "hooked" on insects and his career in economic entomology was established. After graduating from the University in 1935 he was appointed to the research staff of the Saskatoon Laboratory. Although he was involved in investigations of the biology and control of most field crop insect pests he also, as was demanded in those days, spent considerable time in extension entomology. Howard preferred research on cutworms and became the leading authority on the bionomics and control of the red backed cutworm and the flax bollworm. He was placed in charge of the Entomological Laboratory in Saskatoon in 1956, directed all entomological activity there and, after 1957, in the Entomology Section of the Research Station. In addition to his administrative duties he participated actively in pesticide residue work, chemical control of grasshoppers, and insect bionomics. He authored 65 research papers and reports and served as a leader on many insect and pesticide advisory committees. Howard was President of the Entomological Society of Saskatchewan in 1958 and 1970.



McKINLAY, Kenneth Stewart
 B.Sc. Special, Ext. Lond. (1948)
 Born: 25 February 1923
 Southampton, England
 Retired: 29 October 1982
 Address: 1513 Wiggins Avenue
 Saskatoon, Saskatchewan
 S7H 2J7

Mac was educated in Southampton, England, where he earned a B.Sc. degree in Zoology. His University education was interrupted by a three and a half year stint as a navigator in Lancaster bombers with the Pathfinder Force of the R.A.F in World War II. His first research position (1949) was at the East Malling Research Station in England as a toxicologist trying to control red spider mites on apples. These had become pests only after the new hydrocarbon insecticides had removed the mite's predators. After two years at Malling he left for a 10-year assignment with the Colonial Office in Uganda, Tanganyika, Zanzibar and Swaziland investigating the use of pesticides to control insect pests of cotton and coconuts. The peasant agriculture, based on the hoe, did not warrant the use of insecticides whereas timely planting and weed control allowed reasonable production without chemical control. In 1961, Mac joined the staff of the Canada Agriculture Research Station in Saskatoon where his original project was to study grasshopper control. An absence of pest populations permitted him to engage in a wide ranging experimental program including the need for dry material in the grasshopper diet, studies on the effects of spray droplet size on drift, the toxicities of insecticides and herbicides, and designing machines which would apply sprays of uniform droplets of any chosen size. Mac served as President of the Entomological Society of Saskatchewan in 1974.



MacLEOD, Malcolm Norman

Born: 21 March 1923
Saskatoon, Saskatchewan
Retired: 29 October 1983
Address: 410 Hilliard Street E.
Saskatoon, Saskatchewan
S7J 0E8

“Mac” attended Turtle Lake Public School, a one-room rural school located north of Borden, Saskatchewan. Here he completed Grades 1-9 and Gr. X-XII by Correspondence. He joined the army in 1943, trained as an infantryman and went overseas in 1944. As a member of the Queen’s Own Cameron Highlanders of Canada, he was on active duty in Belgium and Holland, was wounded, returned to Canada in 1945 for treatment and discharge. In 1946, he was recommended for, and accepted a position as a technician at the Dominion Entomological Laboratory, Saskatoon. Here, under the direction of A.P. Arnason (later by H. McDonald, W.B. Fox, R.H. Burrage and J.F. Doane) he conducted studies on the chemical and cultural control of wireworms, and damage assessment to cereal and vegetable crops. This involved a multiplicity of replicated field plot tests, assessment of dozens of newly synthesized hydrocarbon insecticides applied to soil or as seed dressings, population sampling, and residue analyses. The 1948 success of BHC as a seed dressing for the control of wireworms in cereal crops is still the recommended practice today. Mac remained with the wireworm project until retirement. His meticulous care in planning and conducting experimental work, his capable recording, summarizing, and statistical analyses of data, and dedication to service, have gained him the respect and esteem of his fellow workers in entomology. Mac served as the first Secretary-Treasurer of the Entomological Society of Saskatchewan in 1952.



McLINTOCK, John James Reid F.E.S.C.

B.Sc. (1939) Man.; Ph.D. (1951)
McGill
Born: 18 August 1912
Scotland
Retired: 17 August 1977
Died: 14 October 1982
Victoria, B.C.

John was first introduced to entomology when, as a High School student, he assisted in the Winnipeg Anti-Mosquito Campaign of 1929. His ambition was to become a mining engineer but after two years at the University of Manitoba the Great Depression had begun, funds were exhausted but he found employment in the coal mines near Glasgow, Scotland. He returned to the University of Manitoba in 1937, changed course and graduated in science (biology and chemistry). John then began his entomological career as an agricultural assistant at the Dominion Entomological Laboratory, Brandon, in 1939. Because his interests lay in medical entomology, specifically mosquitoes and the diseases they vectored, he resigned to work for the City of Winnipeg as the Field Manager for mosquito control (1940-1943). This was followed by six years as an entomologist with the Manitoba Department of Health (1943-1948). John moved to Lethbridge in 1948 as Research Director of a new program dealing with the biology and control of livestock insects in western Canada; he investigated the horn flies. In the early 1950s, John joined the Veterinary-Medical Unit in Ottawa to undertake bionomic studies of biting flies, especially mosquitoes. On leave for two years (1955-1957) he worked with W.H.O. in Iran as a medical entomologist. In 1965 he transferred to Saskatoon where he headed, until retirement, a multidisciplinary study of the biology of mosquitoes and the ecology of western equine encephalitis. This program included the causes, vectoring and preventive approaches to WEE, and the control of mosquitoes in the prairie provinces. He was President of the Entomological Society of Canada in 1974.



McMAHON, Harold Alexander

B.S.A.(1933), M.Sc. (1940) Sask.
Born: 6 October 1909
Melfort, Saskatchewan
Retired: 5 October 1974
Died: 21 October 1986
Saskatoon, Saskatchewan

Harold was born on a farm near Melfort, Saskatchewan, and received his primary and secondary education in that centre. In 1931 and 1932, during his undergraduate years at the University of Saskatchewan, he worked as a summer assistant to Robert Glen at the Dominion Entomological Laboratory, Saskatoon. Here he was involved in studies of the population dynamics of wireworm, their damage to cereal crops, and also conducted grasshopper abundance surveys. As a full-time member of the staff in 1932 he assisted A.P. Arnason investigate the value of summerfallowing and seeding rates as cultural control methods of wireworms. From 1936 to 1942, Harold was in charge of seasonal co-operative wireworm investigations and entomological extension duties at the Dominion Experimental Station at Swift Current, Saskatchewan. He served in the R.C.N.V.R. during World War II (1942-1946). Harold rejoined the Laboratory upon discharge and was assigned the newly initiated program of investigating pests of forage crops. This involved identifying and determining the distribution, damage potential and management of all harmful and beneficial insects affecting legumes and grasses. Harold initiated studies of the systematics of *Lygus* spp. in western Canada; devised and publicized methods for the control of *Lygus* bugs; recommended seed crops and locations for economic production of alfalfa seed; established and promoted the use of bumblebees as pollinators of forage crops; and initiated and established the management of leafcutter bees as pollinators in alfalfa seed-producing areas in northern Saskatchewan.



McMILLAN, Hugh Ellis

B.Sc. (Hon.) (1927), M.Sc. (1930)
Sask.
Born: 25 December 1903
Newington, Ontario
Died: 24 June 1935
Berkeley, California

Ellis received his initial and secondary education in Saskatoon, Saskatchewan, excelling in athletics, especially tennis and basketball. At the Tennis Club he became acquainted with K.M. King who offered him part-time work at the Dominion Entomological Laboratory. The interesting work with insects, and the money earned then and during his years at the University, enabled him to earn a degree in Biology with a specialty in entomology. At that time he was the Provincial Men Singles Tennis Champion (4 years); he also played and coached basketball. Although he had been investigating the biology and control of wireworms (1925-1928) he turned his attention to studies of the biology, fecundity, and control of the pale western cutworm. He transferred to Lethbridge, Alberta in 1932 where H.L. Seamans was coordinating the work. He spent three summers (1931-1933) at Indian Head, Saskatchewan, where he was engaged in assessing the damage to cereal crops by cutworms, surveying for abundance of worms, and advising farmers how to control the pests. Ellis completed a comprehensive study of the life history and biological effects of a hymenopterous parasite of the pale western cutworm. He attended the University of California on a two-year Commonwealth Service Fund Fellowship during the academic year 1934-1935, developed pneumonia in the spring, was admitted to hospital 10 days before his final oral Ph.D. exams, and died before the school year ended. Regrettably, potential contributions to academic excellence and athletics and a promising career in entomology were terminated.



MOORE, Herman William
 B.S.A. (1934), M.Sc. (1936) Manitoba
 Born: 15 July 1912
 Winnipeg, Manitoba
 Died: 30 December 1950
 Saskatoon, Saskatchewan

Herman joined the staff of the Dominion Entomological Laboratory, Brandon, Manitoba, in 1934. At that time the principal entomological project dealt with grasshoppers, especially ecological studies of all the environmental factors that affected fluctuations of populations. Herman studied the inter-relationships of abiotic and biotic factors in an extensive array of grasshopper-infested fields at Arnaud, Manitoba; known as the Arnaud Study Centre. He also participated in grasshopper control experiments using arsenical baits. In 1944, Herman was transferred to the Dominion Entomological Laboratory, Saskatoon, and was made responsible for the annual grasshopper abundance surveys and forecasting of outbreaks in Saskatchewan. He succeeded R.H. Handford in 1946 as Co-ordinator of Grasshopper Research, standardized the methods of conducting grasshopper abundance surveys and instituted a research program to determine the incidence of grasshopper parasites in western Canada. His biological research included a description of embryonic stages of grasshoppers when reared under specified abiotic conditions. A fatal heart attack ended early a promising career in entomology.



MOORE, Keith Colwell
 Dip. Biol. Sci. Tech. (1975) Kelsey
 Instit.
 Born: 3 November 1955
 Saskatoon, Saskatchewan
 Address: Research Station
 Agriculture Canada
 107 Science Cresc.
 Saskatoon, Saskatchewan
 S7N 0X2

Keith spent his early childhood on a farm near Saskatoon and completed his High School education in Assiniboia, Saskatchewan. He has had a lifelong interest in the life sciences though not specifically entomology. After receiving his diploma in Biological Sciences in 1975, he worked for nine months on contract to a National Research Council - Industrial Research Assistance project in Tisdale conducting research related to alfalfa agronomy and processing. From 1976 to 1977 he worked as an environmental chemist for Alberta Power where he monitored air and water quality while carrying out a program of environmental studies. In late 1977 he joined a research group funded by the Medical Research Council, in the Physiology Department, College of Medicine, University of Saskatchewan, studying neurochemical and neuropharmacological functions of the central nervous system. In 1979 he accepted a position with the then Entomology Section of the Agriculture Canada Research Station, Saskatoon. His early research focussed on the nutritional requirements and nutritional enzyme kinetics of insects, the use of insects as bioassay organisms, and the olfactory and feeding responses of grasshoppers to nutrient and non-nutrient chemicals. Since 1985, Keith has shifted the focus of his investigations to the diseases of grasshoppers and bertha armyworms, especially those caused by fungal and viral pathogens. Keith served as President of the Entomological Society of Saskatchewan in 1987.



MUKERJI, Mukul K.
 B.Sc. (1957), M.Sc. (1959) Calcutta;
 Ph.D. (1965) McGill
 Born: 6 January 1938
 Dacca, India
 Retired: 26 September 1989
 Address: 4905 Alameda Crescent
 Victoria, B.C.
 V8Y 1Z7

Early experience in entomology was obtained as a Lecturer in Ripon College in Calcutta and in research at the Agricultural Research Institute in New Delhi. After completing his doctorate in Canada in 1965 he spent a year as a Postdoctoral Fellow at the federal Forest Research Laboratory, Victoria, B.C. Primary research activity comprised studies on predation processes in insects. After joining Agriculture Canada as a Research Scientist in 1967, he was stationed initially at Chatham and later moved to London, Ontario to conduct population studies of subterranean insects that affect crucifers. This research was continued at the Entomology Research Institute in Ottawa (1968-1970). He then moved to the Ottawa Research Station to conduct studies on population dynamics of insect pests on forage. From 1973 to 1989 he was with the Research Station in Saskatoon. Primary research activity in Saskatoon was to develop a management system for grasshopper populations. Mukul made notable contributions to our knowledge of grasshopper life systems, damage assessment, and forecasting of outbreaks. He developed a weekly up-dating system of grasshopper populations as an alert mechanism for Saskatchewan farmers. He authored or co-authored 56 scientific publications and approximately 60 articles on technology transfer. He has been an Associate Editor of the *Canadian Entomologist* since 1978 and later served as an Assistant Editor of the same journal until 1989.



MURRELL, Dorothy Constance
 B.Sc. (1975) Simon Fraser; M.Sc.
 (1980) Guelph
 Born: 11 January 1954
 Vancouver, B.C.
 Address: Sask. Agriculture & Food
 McIntosh Mall
 Box 3003
 800 Central Avenue
 Prince Albert, Saskatchewan
 S6V 6G1

While attending Simon Fraser University, Dorothy developed an interest in plants and pollination, hence her fascination with bees. She spent a summer (1972) as a student assistant in range management studies at Kamloops with Agriculture Canada, then with the B.C. Ministry of Agriculture engaged in plant pathology research (1973), and apiculture (1974). Dorothy's interest in plant-pollinator relationships directed her toward a career in apiculture. She completed a Master's degree in entomology at the University of Guelph in 1980; her thesis dealt with forage crop varieties and their relative attractiveness to honey bees. Her honey bee interests led to a year with CUSO where she investigated beekeeping as a potential village-level industry in Bangladesh; especially for women. She and her husband conducted this study (1978-1979) finding that beekeeping was quite feasible especially in oilseed-growing and forested areas. After working as an apiculturist for Alberta Agriculture in 1980-1981, she joined Saskatchewan Agriculture & Food in 1982 and is now the provincial apiculture specialist responsible for extension work in the leafcutter bee and alfalfa seed industries. This work involves short courses, developing an IPM program for alfalfa seed production, conducting research and development programs, and maintaining liaison between provincial, national, and international concerns in apiculture and the leafcutter bee industry.



NEILL, Garnet Bruce
 B.S.A. (1974), Ph.D. (1982) Manitoba
 Born: 10 November 1952
 Winnipeg, Manitoba
 Address: P.F.R.A. Shelterbelt Centre
 Agriculture Canada
 Indian Head, Saskatchewan
 SOG 2K0

Bruce, though raised in an urban setting, was keenly interested in biological "things", including the insects. After completing his undergraduate work he immediately entered a Ph.D. program at the University of Manitoba. His thesis research comprised the "*Bionomics of the sunflower beetle and its parasites in Manitoba*". Since 1978 he has been the Manager of the Investigation Section at the P.F.R.A. Shelterbelt Centre. This Centre supplies tree seedlings for plantings in shelterbelts and gardens of farms in the three Prairie Provinces. As Manager he oversees a research program dealing with shelterbelt entomology, tree pathology, herbicidal weed control, plant propagation, tree improvement, and shelterbelt effects. Bruce's entomological interests include pheromone use and pest management of the various insects and mites that attack tree seedlings and shelterbelts on the prairies. Bruce has been active in the affairs of the Entomological Society of Saskatchewan holding positions of Secretary (1983-1988), Treasurer (1983-1990), and Newsletter Editor (1984-1985). He is also involved in a number of Saskatchewan Advisory Committees and is an adjunct Professor with the University of Manitoba.



OLFERT, Owen O.
 B.Sc. (1973), B.S.A. (Hon.) 1975,
 Ph.D. (1979) Sask.
 Born: 31 July 1948
 Swift Current, Saskatchewan
 Address: Research Station
 Agriculture Canada
 107 Science Cresc.
 Saskatoon, Saskatchewan
 S7N 0X2

Owen grew up on farm in south-western Saskatchewan, received his elementary education at Iris School and High School education in Wymark, graduating in 1966. After a three-year stint in the oil fields he enrolled in a science course at the University of Saskatchewan and graduated in 1973. However, in 1972 he and his wife, as exchange students, went to Germany where they took classes at the University of Goettingen. On his return he was accepted as a student in the College of Agriculture, graduating two years later. As an undergraduate student in the 1970's, Owen's interest in entomology was stimulated by involvement in summer projects at the federal Research Station in Saskatoon. This interest was consummated in a doctoral program in which he evaluated and quantified the defoliation of wheat by grasshoppers; a baseline study of the economics of grasshopper damage. In 1979 he accepted an appointment to the staff of the Agriculture Canada Research Station, Saskatoon. Here the major emphasis of his research has been on the assessment of insect damage, cultural control, and management systems as related to the grasshopper problem on the prairies. Included in his work is the conduction of the annual grasshopper abundance surveys and the forecasting of outbreaks in the Province of Saskatchewan. Owen has also studied the life history, abundance, and control of the wheat midge (1983-1987). Currently he is involved in spatial analysis of biotic and abiotic factors that influence the rise and fall of grasshopper populations; an aid in forecasting outbreaks on the prairies. Owen served as President of the Entomological Society of Saskatchewan in 1983 and as Secretary since 1988.



PAUL, Lorne Caswell
 B.Sc. (Hons.) (1930), M.Sc. (1932)
 Sask.; Ph.D. (1940) Iowa St. Coll.
 Born: 27 October 1904
 Prince Albert, Saskatchewan
 Retired: 30 June 1972
 Address: 836 University Drive
 Saskatoon, Saskatchewan
 S7N 0J6

Lorne received his primary education at Macdowall, Saskatchewan but finished his High School in Battleford. After three months of Normal School training in Saskatoon (1923), he taught in the public schools of the province for three years. Lorne then enrolled at the University of Saskatchewan in 1926. As a pre-med student he also worked part-time as a laboratory demonstrator in Biology and for two summers worked at the Dominion Entomological Laboratory, Saskatoon, joining the staff in 1930 after graduation. Although involved in the investigation of the life histories, bionomics, biology, and control of all field insect pests, Lorne soon was placed in charge of the grasshopper project. Here he was responsible for the annual surveys of grasshopper abundance, the forecasting of outbreaks, extension work concerning grasshopper control, and experimentation to find the best formulation for arsenic baits. His research included pioneer work on the formulation of oil baits, and the use of flour as a substitute for bran in baits, the use of dry bran baits in place of moist baits, and the use of sawdust as the carrier of arsenic in baits. He also completed one of the first assessments of the economic value of grasshopper control. In 1944, Lorne resigned to accept a position as Associate Professor of Extension with the College of Agriculture, University of Saskatchewan. Here he worked, until retirement, in adapting research findings to operational farming practices. Some of his publications have been published in five languages; one in seven languages.



PESCHKEN, Diether Paul
 B.Sc. (1959), M.Sc. (1960) Manitoba;
 Ph.D. (1964) Goettingen
 Born: 3 April 1931
 Cologne, Germany
 Address: Research Station
 Agriculture Canada
 Box No. 440
 Regina, Saskatchewan
 S4P 3A2

Diether attended elementary schools in Cologne and completed his secondary education in the Bismarck Gymnasium in Karlsruhe, Germany in 1950. After a one-year stint in Skaneateles, N.Y. on a Rural Teenager Exchange program, he emigrated to Canada in 1952. He worked on several farms and in the bush for two and half years and finally reached Manitoba where he decided on an education in agriculture, receiving two degrees in agriculture and entomology, respectively, by 1960. He returned to Germany to complete a doctoral program in which he studied the orientation behaviour of adult aphidophagous hover flies when in search of food. In 1964 he joined the staff of the Entomology Research Institute, Belleville, Ontario, to work on the biological control of Canada thistle and St. John's-wort. In 1972, after the closure of the Belleville Laboratory, Diether transferred to the Regina Research Station where he began biological control studies of sow-thistle, bladder campion and scentless camomile. Eventually five insects were screened for use against Canada thistle, three against sow-thistle and one to control bladder campion. To date only three insect species have become established; the others have vanished and the weeds are still relatively abundant. He also studied the adaptation of the St. John's-wort beetle, *Chrysolina quadrigemina*, to winter cold in the interior of British Columbia. Diether has just completed a study of the economic losses caused by weeds and the favourable suitability of scentless camomile for control with insects. He has served as Secretary (1976-1982) and President (1989) of the Entomological Society of Saskatchewan.



PETERS, Elmer George
 Born: 18 August 1920
 Saskatoon, Saskatchewan
 Retired: 29 December 1975
 Address: 115 - 219 Grant Street
 Saskatoon, Saskatchewan
 S7N 2A5

Elmer was born and raised in the Mennon district of north-central Saskatchewan. He attended *Embury School*, a one-room, rural school where he completed nine grades of his early education. He continued to work on the farm with his father until World War II commenced. On 9 October 1941 he joined the army, the Saskatoon Light Infantry, later transferring to the First Special Service Force, an elite attack force using paratrooper tactics. In 1943 he was sent to the Aleutian Islands and then to Italy where he participated in establishing the Anzio beachhead. On 20 February 1944 he was wounded, then repatriated, hospitalized, and discharged from the army in October 1944. On 3 May 1946, after extensive rehabilitation, Elmer accepted an appointment as a technician at the Dominion Entomological Laboratory, Saskatoon. He was assigned to work with H.W. Moore, L.G. Putnam and P.W. Riegert who were investigating the many aspects of the biology and control of grasshoppers in western Canada. This included the formulation and application of chemical insecticides; assessment of the effectiveness of control; collection and examination of grasshoppers for parasites; and annual collection, treatment, and examination of grasshopper eggs to determine seasonal embryological development. He was also involved in, and for several years before retirement, was responsible for the annual surveys of abundance of adult and egg populations of grasshoppers, analysis of data, and the preparation of outbreak forecast maps (initially done by hand!). The accuracy of such forecasts are, in large measure, due to his meticulous attention to detail and consistent adherence to precise analytical procedures.



PETERSON, Lloyd Otis Tilfred
 B.Sc. (1933) Sask.; M.Sc. (1939)
 Minn.
 Born: 22 March 1903
 Price County, Wisconsin
 Retired: 21 March 1968
 Address: Box No. 866
 Indian Head, Saskatchewan
 S0G 2K0

Lloyd was one year old when he came to Canada from the United States with his parents in 1904. The family settled temporarily at Melfort, Saskatchewan. Lloyd attended public school at Bagley, a rural community 10 miles north of Melfort, and high school at Kinistino. He attended Normal School for teacher training in 1924 and taught in rural schools from 1925 to 1927. He enrolled at the University of Saskatchewan and graduated with a baccalaureate in Biology in 1933. While at the University, he got summer employment as an Insect Pest Investigator at the Dominion Entomological Laboratory, Indian Head, Saskatchewan, which was responsible for the investigation of the biology, ecology and control of shelterbelt and shade tree insect pests in the agricultural area of the Prairie Provinces. In 1939, Lloyd received his Master's degree and was also appointed Head of the Indian Head Laboratory when the incumbent was transferred to Ottawa. In 1957 when Forest Entomology was reorganized, the Indian Head laboratory was disorganized and made a Section of the Forest Nursery Station under P.F.R.A. Here Lloyd continued his investigations till he retired in 1968. Pests of major importance under investigation during Lloyd's term of service were: the forest tent caterpillar, poplar borer, ash borer, spruce sawflies, pine needle scale, spruce spider mite, fall cankerworm, carpenter-worm, willow and poplar leaf beetles, and root borers in nursery plantings. Lloyd was President of the Entomological Society of Saskatchewan in 1965.



PICKFORD, Roy
 B.S.A. (1949), M.Sc. (1951), Ph.D.
 (1971) Sask.
 Born: 19 September 1917
 Moose Jaw, Saskatchewan
 Retired: 25 September 1975
 Address: Thetis Island
 British Columbia
 V0R 2Y0

Roy grew up and was educated in the Moose Jaw area of Saskatchewan and became familiar with the prairie environment in these formative years. During World War II he served with the Survey Regiment of the Royal Canadian Engineers from 1940 to 1945. A University education followed his demobilization from the army. His first association with professional entomology occurred in 1948 as a seasonal assistant at the Dominion Entomological Laboratory, Saskatoon, Saskatchewan. From then on entomology to Roy meant grasshoppers, a group of insects to which he devoted all of his research years. Not only was he involved in the annual surveys of abundance and the forecasting of outbreaks, some of his efforts were directed toward chemical control of these insects and to evaluation of the effectiveness of organic insecticides. His biological studies included life histories, reproduction, development, and fecundity of pest grasshoppers; parasitism; reproductive behaviour, and the morphology of grasshopper sex organs. Much of our current knowledge of foods, feeding and nutrition in the ecology of grasshoppers is derived from his research. Roy served as President of the Entomological Society of Saskatchewan in 1973.



PIVNICK, Kenneth Andrew
 B.Sc. (Hons.)(1978) U.B.C.; Ph.D.
 (1985) Laval
 Born: 9 July 1955
 Toronto, Ontario
 Address: Research Station
 Agriculture Canada
 107 Science Crescent
 Saskatoon, Saskatchewan
 S7N 0X2

Ken began his entomological career at Laval University in 1980 when he entered a Master's program supervised by Jeremy McNeil. He studied the reproductive and foraging strategies and thermoregulation of the adult European skipper, an expanded and comprehensive study that resulted in a doctoral thesis 1985. That year he won the John H. Comstock Outstanding Graduate Student Award of the Eastern Branch of the Entomological Society of America. From 1985 to 1988, he worked as a Research Associate of the National Research Council in Saskatoon, studying the use of sex pheromones and host plant chemicals by several prairie insect pests. In the fall of 1988, he began work at the Canada Agriculture Research Station, Saskatoon, to improve pest management in oilseed crops, especially in canola. His primary goals are to understand host-plant/insect interactions involving the crucifer flea beetle and the diamond back moth, and to assist in the development of flea beetle-resistant canola varieties. Ken served as President of the Entomological Society of Saskatchewan in 1986-1987. He has a keen interest in butterflies and annually undertakes a butterfly count in Saskatoon and in the Grasslands National Park in conjunction with the Xerces Society.



PUTNAM, Lloyd George
 B.S.A. (1937), M.Sc. (1939) Sask.
 Born: 15 March 1913
 Watson, Saskatchewan
 Retired: 14 March 1978
 Address: 35 Kirk Crescent
 Saskatoon, Saskatchewan
 S7H 3B1

Having completed his elementary education in a one-room rural school, Quill Plain School (1919-1927), Lloyd attended High School in Watson, Saskatchewan (1927-1930), and in Outlook, Saskatchewan (1930). He remained on the family farm for another year and then enrolled in agriculture at the University of Saskatchewan where he majored in cereal breeding (1933-1937). Lloyd continued in a Master's program (1937-1939), where he researched the genetics of solid-stemness of Durum wheat. In the summers of the years he was at the University, he worked for the Field Husbandry Department and got his first taste of practical entomology when he spread poison bait to control grasshoppers on the cereal plots. In 1937 he was offered a position on the staff of the Dominion Entomological Laboratory, Saskatoon, when the incumbent, V.L. Berg, resigned. Lloyd served in the Canadian Army during World War II (1942-1945), participated in the Normandy invasion of 1944, and returned to his former entomological endeavours after demobilization. During his years in entomology in the three Prairie Provinces, Lloyd has investigated all phases of the biology, ecology, and control of pest grasshoppers. A major portion of his work entailed investigations of, and experimentation with various types of agricultural machinery and agronomic practices that comprised the cultural control aspects of limiting grasshopper populations. Thorough field testing and evaluation of numerous insecticides was also his lot, as were studies of predation, parasitism, population dynamics, nutrition, damage assessment, and control of insect pests of oilseed crops. Lloyd served as the first (1952) and fourth (1955) President of the Entomological Society of Saskatchewan.



REMPEL, Jacob Gerhard F.R.S.C.
 B.Sc. (Hons.) (1931), M.Sc. (1933)
 Sask.; Ph.D. (1937) Cornell
 Born: 26 June 1903
 Nieder Chortitza, Ukraine
 Retired: 30 June 1970
 Died: 30 May 1976
 Victoria, B.C.

After surviving extreme hardships in his native Ukraine following World War I, Jake emigrated to Canada where, despite language and financial problems, he graduated with High Honours in Biology and received the Governor-General's Gold Medal. The University of Saskatchewan was home to him from 1928 to 1970; his initial teaching appointment was at Regina College (1933-1946), then at the Saskatoon campus until retirement. He was an outstanding teacher of general biology, entomology, and embryology, giving inspiration to many students through his infectious enthusiasm. He excelled in meticulous entomological research in such varied areas as insect taxonomy, morphology, embryology, and medical entomology. Jake's initial research in 1936 involved detailed studies of the life history and morphology of midges and their associated parasites. Mosquitoes then became his prime target of study, especially where these related to blood feeding and their role as intermediate hosts of western equine encephalitis. His taxonomic guides to the adult and larval mosquitoes of Saskatchewan remain as standard entomological references, even today. The chemical control of black flies and the embryology of blister beetles and black widow spiders were also included in his research repertoire. He served as President of the Entomological Society of Saskatchewan in 1959, as a member of the Governing Board of the Entomological Society of Canada (1967-1968) and received its Gold Medal for Achievement in 1971.



RIEGERT, Paul William F.E.S.C.
 B.A. (1944) Sask.; M.Sc. (1948) Mont.
 St. Coll.; Ph.D. (1954) Illinois
 Born: 5 December 1923
 Laird, Saskatchewan
 Retired: 30 June 1986
 Address: Department of Biology
 University of Regina
 Regina, Saskatchewan
 S4S 0A2

Paul's career in entomological research – specifically acridological research – began in 1944 at the Dominion Entomological Laboratory, Saskatoon, and lasted for more than 24 years. His initial entomological investigations involved the biology and control of the red-backed cutworm and the wheat stem sawfly. Since 1948 the principal research work centred on problems of nutrition, chemical control, parasitism, and ecology of pest grasshoppers. Considerable emphasis was placed on population dynamics of grasshoppers including the annual surveys of population density and forecasts of outbreaks. After joining the University of Regina in 1968, he was responsible for the teaching of all courses in entomology, cell, and animal physiology. His research there focused on the bioenergetics and nutrition of insects. During the last decade of his tenure at the University, and continuing into retirement, he has turned to our entomological past and is writing the *"History of Entomology in Western Canada"*; Volume I was published in 1980. Paul has served as President of the Entomological Society of Saskatchewan (1957); Chairman of the Membership (1977) and Heritage (since 1975) Committees, and Director (1975-1988) of the Entomological Society of Canada.



RONEY, Keith Norman
 B.A. (1970) Sask.
 Born: 7 February 1948
 Regina, Saskatchewan
 Address: Saskatchewan Museum of
 Natural History
 2340 Albert Street
 Regina, Saskatchewan
 S4P 3V7

Keith's first exposure to entomological research occurred during the summer months of 1967-1969 while working as a summer student at the Canada Agriculture Research Station in Saskatoon. Here he assisted with investigations of the distribution and control of the sweet clover weevil under the direction of C.H. Craig. In 1971 he joined the staff of the Saskatchewan Museum of Natural History in Regina. The first few years were dedicated to the establishment of nature trails and a naturalist program in provincial parks. Later he conducted research on the status and food habits of the white pelican and the double-crested cormorant. Largely through his efforts and initiative, legislation was established to provide protection for pelican and cormorant colonies in Saskatchewan. Presently he is the Curator of Invertebrates at the Museum; in charge of collecting and maintaining a representative collection of Saskatchewan's insect fauna. Keith is currently sorting and identifying (to species) the Hymenoptera specimens in the collection. He is also assisting with the planning of the exhibits for the redevelopment of the Life Sciences Gallery at the Museum.



SAUNDERS, Leslie Gale
 B.S.A. (1920), M.Sc. (1921) McGill;
 Ph.D. (1925) Cambridge
 Born: 30 June 1895
 London, England
 Retired: 30 June 1961
 Died: 13 September 1968
 Victoria, B.C.

Les attended Highgate Grammar School and at age 16, before he completed London Matriculation, he and his brother emigrated to Canada to assess the possibilities of fruit growing in B.C. Arriving in Truro, N.S. in 1912, he found that fruit could be grown in Nova Scotia, much closer to England than B.C. He stayed to attend the Agricultural College, became fascinated with entomology under the tutelage of Robert Matheson, and decided to make it his life's work. While at College and for most of World War I, he worked as an economic entomologist for the Nova Scotia government on the control of orchard pests in the Annapolis Valley. He served with the 10th Siege Battery in Halifax until the great flu' epidemic of 1918 laid him low until war's end. Les continued his education at Macdonald College after the war and the prestigious "1851 Scholarship" enabled him to attend Cambridge University. In 1925 he turned down a chance to go to the South Seas with J.D. Tothill and accepted President Murray's offer of an academic position in the Biology Department of the University of Saskatchewan. Here he remained to teach entomology, parasitology, invertebrate zoology, and histology until retirement. His research encompassed studies of intertidal insects, freshwater amphipods, fish tapeworm, and the biology, taxonomy, and life histories of many chironomid species. Many of western Canada's foremost entomologists (Arnason, Farstad, Glen, Handford, King, Manson, McDonald, Paul, Seamans) were his graduate students. Les was also an accomplished painter, photographer and grower of bonsai trees.



SOROKA, Juliana Judy
 B.Sc. (Hon.) (1975) Sask.;
 M.Sc. (1984), Ph.D. (1989) Manitoba.
 Born: 18 January 1953
 Smeaton, Saskatchewan
 Address: Research Station
 Agriculture Canada
 107 Science Crescent
 Saskatoon, Saskatchewan
 S7N 0X2

Julie grew up on a farm in north-eastern Saskatchewan, attended the Smeaton school until age 16 and then finished her High School in Choiceland. Because she had an interest in biology she enrolled at the University of Saskatchewan for further studies, being especially interested in freshwater biology. In 1976 she joined the staff of the Water Survey of Canada, Inland Waters Directorate, Environment Canada, Regina. Here she was involved in analytical work concerning the abiotic factors of the environment, principally that of sediments and water. In 1978 she joined Agriculture Canada at the Research Station, Regina, where she assisted P. Harris in screening and assessing the efficiency of insects as biocontrol agents of weeds. Under the auspices of the Agriculture Canada Scientific Training Program she enrolled at the University of Manitoba in 1982. Here she completed a Master's program including research on damage assessment of flea beetle injury to broccoli, and a doctoral thesis on pea aphid damage in field peas. Since 1988, Julie has been on staff of the Research Station in Saskatoon with duties related to forage crop entomology. This includes the biocontrol of *Lygus* bugs, development of resistance by host plants to sweet clover weevil injury, and surveys of the abundance and distribution of the alfalfa seed chalcid in Saskatchewan.



STECK, Warren Franklin
 B. Eng. (1960) McGill; Ph.D. (1964) Sask.
 Born: 10 May 1939
 Regina, Saskatchewan
 Address: National Research Council of
 Canada
 Plant Biotechnology Institute
 Saskatoon, Saskatchewan
 S7N 0W9

Warren attended Strathcona Elementary School and then completed his High School education in Central Collegiate in Regina. He could not refuse a scholarship and so embarked on a career in chemical engineering at McGill University. His summers were spent like so many other engineers; jobs in oil refineries, gas pipeline projects and as an NRC summer student. His doctoral program, under the encouraging eye of J.M. Pepper, included research on wood chemistry - a serendipitous slide from the physical to the biological side of science. His post doctoral fellowship position was served at the Oklahoma Research Institute where he became involved in the identification of plant chemicals. This augmented his interests in organic chemistry, culminating in his accepting a position with the NRC Regional Laboratory in Saskatoon in 1965 to conduct research into the formation of phenolic compounds in plants. He became interested in insects about 1970 when considering the use of chemicals to protect crops or what is referred to today as "alternative pest control strategies". From 1973 to 1984 he was a member of the National Research Council's insect pheromone research group - the synthesis of sex pheromones and field evaluations of species-specific lures for many lepidopteran species. Warren was appointed Director of NRC's Plant Biotechnology Institute in Saskatoon in 1983. In addition to his many and varied administrative duties he maintains an interest in the commercial development of pheromone chemicals in Canada, is a keen observer of nature, does a little collecting and has an abiding curiosity in the moths of the Prairies.



STEWART, Woodrow Wilson Anthony
 B.Sc. (1944) Manitoba
 Born: 28 May 1918
 Willow Vale, Saskatchewan
 Retired: 15 August 1978
 Address: P.O. Box 402
 2688 Ambleside Avenue
 Cumberland, B.C.
 V0R 1S0

"Woody" grew up on a farm in southern Saskatchewan, attended a local one-room country school and finished his Grades IX and X by Correspondence. He completed his High School education at Campion College, Regina. Having in mind a career in medicine, Woody enrolled at the University of Manitoba. Tuition money was obtained by working for two summers as a raise-rounder in the Cochenour Williams gold mine at Red Lake, Ontario, and as a grain sampler in the Winnipeg rail yards. After graduating with a Bachelor's degree he began his career in entomology by investigating the parasites of grasshoppers at the Dominion Parasite Laboratory, Belleville, Ontario. A transfer in 1946 to the newly-opened Livestock Insect Laboratory, Lethbridge, Alberta, found him engaged in studies of livestock insects and their control. He came to Saskatoon 1948 at the request of A.P. Arnason, to head investigations of the ecology and control of garden insects. Root maggots claimed most of his attention although all noxious garden pests, including the European corn borer - newly arrived on the Prairies - became part of his studies. From 1968 until retirement, he investigated the population dynamics of prairie mosquitoes, advised and recommended abatement programs, and assessed control operations.



TAYLOR, Maurice Edgar
 Cert. Agric. (1940), B.S.A. (1950)
 Sask.
 Born: 31 October 1915
 Truax, Saskatchewan
 Retired: 30 October 1980
 Address: 3319 Harrington Street
 Saskatoon, Saskatchewan
 S7H 3Y2

Maurice grew up on a farm, attended a one-room country school for his elementary education and three years of Correspondence Courses and obtained a Grade XI standing in 1933. He continued to farm with his father during the "Dirty Thirties", worked on a dairy farm in Chemainus, B.C. (1936-1937) and, although finances were limited, he enrolled in the School of Agriculture, University of Saskatchewan in 1938 and graduated in 1940. Maurice then joined the R.C.A.F. (1941), trained in Regina and Montreal as a wireless and electrical mechanic and served in several Air Observer Schools in Canada until discharged in 1945. He returned to Saskatchewan in 1946, enrolled in the College of Agriculture and graduated in 1950. His introduction to entomology came in 1947 as a summer student at the Dominion Entomological Laboratory, Saskatoon, where he assisted H. McDonald in investigations of the bionomics and control of the pale western and redbacked cutworms. He joined the permanent staff of the Laboratory in 1950, continued the cutworm work and also aided in investigations of the life history, population dynamics and control of bertha armyworm and diamond back moth. For the last twenty years of his career (1961-1980) Maurice served as the extension entomologist and scientific liaison officer of the Research Station, answering inquiries and dispensing information on the control of all noxious insects in the province, preparing news releases and assessing the methods used in insect control. Maurice was President of the Entomological Society of Saskatchewan in 1963.



VALERIO, Rudolf Anthony
 M.B. (1964), Ch.B. (1964) Glasgow
 Born: 16 February 1932
 Blantyre, Lanarkshire, Scotland
 Address: 1323 Princess Crescent
 Moose Jaw, Saskatchewan
 S6H 6V7

Rudolf received his early education in Burnbank and Motherwell, Scotland but had to leave school at age 16 to work in the family confectionary-food business. He then served in the Royal Air Force (1952-1954) as an Administrative Officer, married and returned to the family business but was determined to be a doctor - to emulate the missionary-doctor, David Livingstone, who was also born in Blantyre. He entered the Medical Faculty, University of Glasgow, as a mature student in 1958 and graduated six years later with two medical degrees. Rudolf interned for six months in medicine and another half year in surgery, then in general practice for a year. From 1966-1970 he worked in the pathology Department of the Victoria Infirmary, Glasgow, and from 1970-1972 as a pathologist in the Royal Hospital for Sick Children, Edinburgh. In 1972 he emigrated to Canada and settled in Moose Jaw, Saskatchewan, where he has since worked as a pathologist. He had always been interested in nature and science, had started a butterfly collection in Scotland, but work, marriage, family obligations, and medicine prevented an expansion of this interest. However, in 1978 he once more resumed his entomological hobby; the collecting and study of the distribution of the macro-Lepidoptera of Saskatchewan. He has also acquired some Malaysian specimens. His work as an amateur entomologist, in association with K.N. Roney and R.R. Hooper, will enhance our knowledge of the moths and butterflies of the province.



VIBERT, Robert Orville
 Born: 18 December 1931
 Girvin, Saskatchewan
 Retired: 15 January 1988
 Died: 27 October 1990
 Saskatoon, Saskatchewan

Bob was raised on a farm southwest of Girvin, Saskatchewan and attended a local rural school for his elementary education and Gr. IX. The remainder of his High School training was obtained in Saskatoon. After working as a farm hand for a year he applied for a technician position at the Dominion Entomological Laboratory, Saskatoon, and began work on 14 September 1950. He was assigned to the grasshopper research project where he was involved in the annual provincial surveys of abundance of grasshopper adults and eggs. That winter he transferred to the wireworm investigations project and remained with the group until he retired 37 years later, long after the Entomology Laboratory became part of the Research Station complex. Bob participated in the extensive and prolonged experimental work assessing the effectiveness of chemical treatment of soil and seeds for wireworm control; in studies of wireworm population densities and fluctuations; in determining food preferences, and assessing damage to crops. He could "fix" anything; his mechanical skills were in constant demand to keep all equipment functioning properly. His good nature and perseverance provided the bonding that resulted in the coherence and success of the many facets of wireworm research.



WEEGAR, Harold Herbert (Bud)
 Born: 24 June 1935
 Sturgeon Valley, Sask.
 Retired: 25 June 1990
 Address: 203 - 2233 St. Henry Ave.
 Saskatoon, Saskatchewan
 S7M 5K6

Bud was born and raised on a farm near Sturgeon Valley in north-central Saskatchewan. He attended *Nisbet* rural elementary school in the Holbein district and then proceeded to Prince Albert in 1949 to attend High School until Grade eleven. He worked at many things in Prince Albert: for the Saskatchewan Department of Natural Resources, as a clothing salesman, and as a grocery clerk. In 1953, Bud participated in the control of forest fires in the Prince Albert and Lac La Ronge districts as a member of the Saskatchewan Smoke Jumpers. He then was employed with the Saskatchewan Department of Forestry in late 1953 but resigned in 1954 to accept a position with the federal Department of Forestry, Division of Forest Biology in Saskatoon. Most of the active summer field work was spent at Candle Lake where he assisted H. van Groenewoud in studies of the ecology of root rot causing stand openings in white spruce. In 1965 he transferred to the Entomology Section, Canada Agriculture Research Station, to work with J.J.R. McLintock and L. Hayles, investigating the biology of mosquitoes and the vectoring of western equine encephalitis. After McLintock retired, Bud worked briefly with M. Mukerji in population studies of grasshoppers, then joined L. Burgess to assist in investigations of the biology and control of canola insect pests: fleas beetles, thrips and false chinch bugs. His consistent dedicated work, accurate observations, and reliable assessments of research data have contributed to our understanding of the biology and control of many pests of forest, farm, man and animals.



WEISS, Ross Michael
 B.Sc. (Hons.)(1985), M.Sc. (1989)
 Sask.
 Born: 15 February 1963
 Saskatoon, Saskatchewan
 Address: Agriculture Canada
 Research Station
 107 Science Crescent
 Saskatoon, Saskatchewan
 S7N 0X2

Ross received all of his education in Saskatoon. His initiation into entomology began when he wrote a fourth-year essay on the potential of biological control agents as mechanisms for the control of insect pest populations. Following his undergraduate training, Ross worked with D.C. Murrell for Saskatchewan Agriculture, monitoring pest insect populations in alfalfa fields that were pollinated by leafcutter bees. He also assisted J.M. Gruszka in an investigation of tracheal mites in honey bees. His Master's thesis research comprised a study of the biology, parasites and damage potential of the lesser clover leaf weevil, *Hypera nigrirostris*, on red clover. Since 1988 he has been employed by Agriculture Canada in Saskatoon. Together with O. Olfert he has investigated the effect of plant resistance on the biotic potential of grasshoppers. Of particular interest to him are the effects of biotic and abiotic factors that affect insect populations, and the use of computer modelling to explain insect population dynamics.



WILLING, Thomas Nathaniel
 Naturalist
 Born: 1858
 Toronto, Ontario
 Died: 30 November 1920
 Saskatoon, Saskatchewan

Thomas Willing received all of his schooling at the Model School in Toronto. He showed an early and intense interest in natural history, especially that of the native flora. The lure of the great unknown western plains brought him to the prairies where, at age 22, he arrived in Winnipeg while working with a railway survey crew. Because of his intimate knowledge of plants and animals he evaluated C.P.R. land for colonization purposes for the next two years (1881-1882). In 1883 he homesteaded near Calgary, then bought a farm near Olds in 1885 where he soon became well-known for his fight against weeds and insects. Because of his expertise in botany, he was appointed a Weed Inspector in 1897 by the Territorial Government, advanced to the position of Chief in 1900 and became responsible for the control of weeds and noxious insects - also Chief Game Guardian in 1905 - in the then North West Territories. He was an avid collector of insects, specimens of which can be found in the Natural History Museum in Regina. He was equally enthusiastic about economic entomology; worked out the life histories of many insects and encouraged the practical control of such pests as the pale western cutworm, wireworms, wheat aphids, potato beetles and cabbage pests. In 1910, Willing was appointed Professor of Natural History at the University of Saskatchewan, a position he held until his death in 1920. In addition to insect and weed identification and control, he taught dairying, cropping practices, and soil conservation; all practical courses for the agriculturist. His unrivalled knowledge of the fauna and flora of western Canada laid the foundation for the information we have today on the natural history of the province.



ZACHARUK, Russel Yaroslaw
 B.S.A. (Hons.)(1950), M.Sc. (1955)
 Sask.; Ph.D. (1962) Glasgow
 Born: 1 May 1928
 Yorkton, Saskatchewan
 Address: Department of Biology
 University of Regina
 Regina, Saskatchewan
 S4S 0A2

Russ was brought up on a farm in the Stornoway district of Saskatchewan, received his elementary education in Angove and Geddes Public Schools and attended the Yorkton Collegiate Institute. His interest in agriculture directed him to the University of Saskatchewan where he obtained a degree in Agriculture with Honours in Biology. He became interested in entomology when he worked as a summer student assistant at the Dominion Entomological Laboratory, Saskatoon, in 1947-1949. This interest, especially in insect morphology, was heightened and expanded in the next 13 years that he remained with the Laboratory. Other than time out for educational leave, Russ investigated various aspects of the biology and ecology of wireworms; their temperature preferenda; rates of growth, morphogenesis, and life stages. He accepted an appointment to the Department of Biology, University of Regina in 1963 and headed the Department from 1965-1971 and again in 1986-1989. Russ has gained an international reputation as an expert on insect microstructure, particularly ultrastructure and function of chemo- and mechano-sensilla. He has investigated the morphology of sense organs of adult and larval wireworms, mosquitoes, midges, water beetles and moths. His scientific publications number well over 50 and include review articles, book chapters and results of research on sensillar ultrastructure, transduction mechanisms of neural stimuli, and fungal and bacterial pathogens in insects. Russ has also been collaborating with research scientists at DuPont, Wilmington, Delaware, since 1985, on the development of feeding deterrents for crop protection from pest insects.