NEWSLETTER
PROBUS CLUB VANCOUVER

#252-2025 West 42nd Avenue, Vancouver, B.C. V6M 2B5 Phone and Fax (604)261-6818
Clubs for retired and semi-retired professional and business persons, former executives and others

...to find more about Probus go to www.probus.org

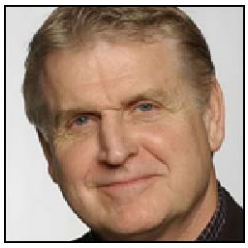
November 2007

Next Meeting: Tuesday November 13, 2007
Time: 9:30 AM
Location: H.R. MacMillan Planetarium and Space Centre - lower Level
Speaker: David Baines

UPCOMING EVENTS

November 23 - BCIT Aerospace Technology Campus Tour

DAVID BAINES



David Baines received his BA from Queen's University and an MBA form the University of Western Ontario. He also passed his Canadian Securities course.

Mr. Baines has spent much of his life in the world of journalism, first with the *Winnipeg Tribune*, and subsequently with the *Province* and then the *Vancouver Sun* where he has served for the past two decades as a securities reporter and columnist.

In his writings, Baines has always represented the interests of consumers who are not well organized and easy prey for the stock hustlers of Vancouver's notorious Howe street district. He has sought to expose promoters who stack the deck in their favor and against investors, and regulators who fail to discharge their mandate to protect the public. He has also targeted professionals such as lawyers, accountants and geologists who aid and abet the process of exploiting investors.

For his efforts, he has received many journalistic awards including four national newspaper awards, a national magazine award and four Jack Webster Awards. He has also been threatened, sued and defamed on numerous occasions.

Several years ago, he turned the tables and successfully sued a group of market players who accused him of trading against his column. Damages were assessed at $825,000 plus legal costs. It was the second largest libel award in Canadian legal history. Last year, Vancouver Magazine named him one of the province's 50 influential people.

Minutes of the Meeting

Attendance: 145 including guests

President **Ted Daem** welcomed members at 10:00 am. He said the Watershed Tour, organized by **Richard Landahl,** was spectacularly successful and then reminded members to sign up for the BCIT Aerospace Technology Campus Tour(details inside). **Nick Thornton** introduced three new members (see Welcome New Members).

These items of business concluded, **Lionel Funt** introduced our speaker, Dr. Gail Anderson, distinguished Forensic Entomologist at Simon Fraser University, who spoke on the subject "Maggots and Murder." Dr. Anderson presented a richly detailed, witty and expert account of this absorbing and sensitive topic, so vividly illustrated as to require a warning and supported by personal knowledge of individual cases. She began by defining Forensic Entomology and relating it to other branches of forensic science. She then explained in detail the two main processes used and touched briefly on other applications and the need for further research. Forensic science is the application of science to law. Forensic sciences include forensic biology, forensic chemistry, and forensic toxicology. Investigation begins with Crime Scene Investigators – the real crime scene investigators are not civilians, as so often portrayed on television, but rather, highly trained police officers called Identification Officers. They will correctly collect the evidence, and submit it to the forensic scientists at the lab, who will then perform the analyses and submit reports to the Investigating Officers.

Forensic Entomology is the study of the insects associated with a human corpse in an effort to determine elapsed time since death. Insect evidence may also show that the body has been moved to a second site after death, or that the body has been disturbed at some time. It can also determine the presence or position of wounds. However, the primary purpose of forensic entomology today is to determine elapsed time since death. This determination can be critical to exonerate the innocent.

Most cases that involve a forensic entomologist are at least three days old, since for shorter periods other forensic methods are used. After three days, insect evidence is often the most accurate and sometimes the only method of determining elapsed time since death. There are two main ways of using insects to determine elapsed time since death :

I - using successional waves of insects

II - using maggot age and development.

In general, the first method is used when the corpse has been dead for between a month up to a year or more, and the second method is used when death occurred less than a month prior to discovery.

The first method is based on the fact that a human body supports a very rapidly changing ecosystem going from the fresh state to dry bones in a matter of weeks or months depending on geographic region. During this decomposition, the remains go through rapid physical, biological and chemical changes, and different stages of the decomposition are attractive to different species of insects. Certain species of insects are often the first witnesses to a crime. They usually arrive within 24 h of death if the season is suitable *i.e.* spring, summer or fall in Canada and can arrive within minutes in the presence of blood or other body fluids. Other species arrive only later. Therefore, with a knowledge of the regional insect fauna and times of carrion colonization, the insect assemblage associated with the remains can be analyzed to determine a window of time in which death took place. This method is used when the decedent has been dead from a few weeks up to a year, or even several years after death, with the estimated window of time broadening as time since death increases. It can also be used to indicate the season of death *e.g.* early summer.

The second method, that of using maggot age and development can give a date of death accurate to a day or less, or a range of days, and is used in the first few weeks after death. Maggots are larvae of Diptera or two-winged flies. The insects used in this method are those that arrive first on the corpse, that is, the Calliphoridae or blowflies.

These flies are attracted to a corpse very soon after death. They lay their eggs on the corpse, usually in a wound, if present, or if not, then in any of the natural orifices. Their development follows a set, predictable, temporal cycle which can therefore be traced and used to determine probable time of death. Temperature also affects the cycle.

Thus an analysis of the oldest stage of insect on the corpse and the temperature of the region in which the body was discovered leads to a day or range of days in which the first insects laid eggs on the corpse. This, in turn, leads to a day, or range of days, during which death occurred. This method can be used until the first adults begin to emerge, after which it is not possible to determine which generation is present. Therefore, after a single blowfly generation has been completed, the time of death is determined using the first method, that of insect succession.

Other uses for insects in forensic science include civil cases and child or senior abuse/neglect. Some insects will colonize wounds or unclean areas on a living person. This is called cutaneous myiasis. In these cases, the victim is still alive, but maggot infested. A forensic entomologist will be able to tell when the wound or abuse occurred. For instance, in the case of neglected children, the onset of maggot infestation will give a minimum time interval since the child last had a diaper change. Such cases occur particularly in young children and seniors.

Although forensic entomology can be very effective in determining elapsed time since death, it has limitations: it is subject to accurate determination of temperature at the site; it is subject to seasons (winter limits insect presence in Canada); results take time to develop; and
finally the body may have been disposed of in a way that excludes insects *e*.g by freezing, burial, or wrapping.

More research is needed. Insect succession varies from geographic region to region and the species and time of colonization must be developed for all areas using this type of evidence. Research has been conducted in British Columbia in a variety of habitats, seasons and geographic areas to develop a database for this Province. Similar databases are presently being developed for Alberta, Saskatchewan, Manitoba and Nova Scotia. Since the presence of drugs may affect the development of the insects, work is planned to determine effects of common narcotics on insects in Canada

In conclusion, insects are evidence! Forensic entomology is a very useful method of determining elapsed time since death after 72 h, and can be used earlier. It is accurate to a day or less, or a range of days, and may be the **only** method available to determine elapsed time since death. Dr. Anderson successfully defended this evidence in court many times. It is vital that the insects are collected properly.
In response to questions, Dr. Anderson referred to her website for details. The flies are attracted to liquid protein, but the presence of blood or semen cannot be determined this way. Half of her graduate students pursue general criminology and half are in forensic entomology, three Ph.D. and three M.A. students. The insects responding to salt water and fresh water are very different. Dr. Anderson reviewed again the stages of insect development and assured her hearers that except in winter in Canada the insects will find the body. She commented that she has testified in the Picton case. Dr. Anderson repeated the need for local knowledge because flies are specific to geographical locale and can identify the area, as for example city versus country. Because insects are specific to regions, successional insects must be known for each location. That is why a vast body of geographically specific knowledge must *be built up*. Television shows provide a seriously distorted and misleading image to young people; they are merely entertainment. There is no such thing as CSI. She outlined the professional requirements established for the field; the certification has been established here: essentially a Ph.D. in entomology, five years in the field, examinations.

Michael King thanked the speaker on behalf of Probus for a talk which demonstrated why *Time* magazine has identified Dr. Anderson as one of the five leading entomologists in the world.

Lindsay Mann, Secretary

PRESIDENTIAL FORUM

Once again your committees are performing well. Fred Cotton's committee keeps pulling a rabbit out of the hat with another interesting, articulate and graphic speaker. Lloyd Doidge's committee has an October 23rd sell-out with the shipyard tour. I'm disappointed I didn't get my name in sooner. I'll sign up early for next year's repeat. I'm looking forward to the BCIT Aerospace tour November 23rd.

For those members who don't want to make their own lunch or would like to enjoy a lunch out with other members of the club, several members meet at Chianti Café & Restaurant 1850 West 4th avenue after the meeting. The food is good and the price is reasonable.

Ted Daem

NOTICES

Member Services Desk: Tremayne Perry
Cash Desk: Craig Arnold, Brent Scott
Greeters: Don Mann, Chris Lee, Bud Boyd

Welcome To Our New Members

Jim Hudson - Banking Executive
Terry Rutherford - Physician
Orrin Webber - Physician

INVESTMENT CLUB NEW EXECUTIVE TAKE OFFICE

Probus members elected to office for the year beginning Sept. 2007 are:

President: Richard Landahl
Vice President: Michael Jacobson
Treasurer: Terry Miller
Investment Committee Chair: Allen Coombes
Investment Committee Vice Chair: Lindsay Mann

Membership in The Rotarian's Investment Club is limited but open to Rotary and Probus members. For information contact the above or Gordon Thom at thomga@telus.net or 604-687-0714

When Insults Had Class:

"He has all the virtues I dislike and none of the vices I admire."—Winston Churchill

"I didn't attend the funeral, but I sent a nice letter saying I approved of it."—Mark Twain

"I never killed a man, but I have read many obituaries with great pleasure."—Clarence Darrow

TOUR

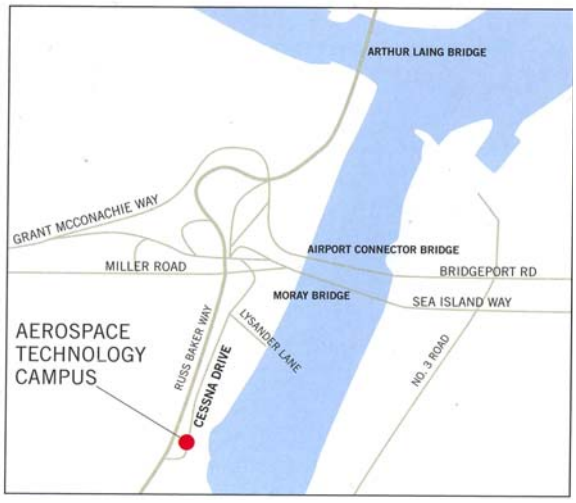
New BCIT Aerospace Technology Campus Tour

November 23, 10:30 AM

The new $77 million BCIT Aerospace Technology Campus at the Vancouver International Airport was officially opened October 12 by Premier Gordon Campbell. A Probus tour of this new facility and operation has been arranged with BCIT Dean of Transportation as our tour leader. Lunch is included in price of $20.

Metered Parking is available at the South end of the campus. Car pooling is suggested. Enter through West entrance. Please complete the registration. At this stage the tour is limited to members only. Contact: Gordon Thom thomga@telus.net or 604 739 0714.

BCIT Aerospace Technology Campus,
3800 Cessna Drive, Richmond BC



New BCIT Aerospace Technology Campus Tour

REGISTRATION FORM

COST: $20.00

Name_____

Phone_____

email_____

Please turn in this form along with your cheque for $20.00 at the November meeting or mail to the Probus Office at #252 - 2025 West 42nd Ave. Vancouver, B.C. V6M 2B5