

THE 919TH MEETING OF THE BRODIE CLUB

The 919th meeting of the Brodie Club took place Tuesday, February 18, 1997, in Room 430 of the Ramsay Wright Building. Eleven members and five guests were present. The chair was Ron Scovell.

Business Meeting

Minutes: The minutes of the 918th meeting, January, 21, 1997, were adopted.

Introduction of Guests:

<u>Member</u>	<u>Guest(s)</u>
Ron Tasker	Tracey Klose, Mary Tasker
Bruce Falls	Trudy Rising
Brodie Club	Noe Zamel, Regina Zamel

Announcements

Fred Bodsworth reported on a forthcoming Nature of Things titled *In Search of Eskimo Curlews*. The Yellowknife government has funded researchers for the last several springs but findings have not been favourable.

Guest Presentation

Ron Tasker introduced our guest speaker. Dr. Noe Zamel was born in south Brazil and studied medicine at several institutions in Europe and North America. He is head of the Respirology Department at Mt. Sinai Hospital and specializes in the genetics of asthma.

Tristan da Cunha is an island almost ½ way between Buenos Aires (1500 miles) and the Cape of Good Hope (2500 miles). A very isolated population of British subjects live in grand isolation on this most remote place on the planet. The nearest island is St. Helena to which Napoleon was exiled. Along with Ascension Island, all three islands are colonies of the U.K. In 1816, the British took possession of Tristan da Cunha, 1,500 miles to the south of St. Helena to discourage Napoleon from thoughts of escaping. The island was discovered by Tristan da Cunha, a Portuguese admiral, but the sea was so rough he never disembarked.

The islanders began issuing their own stamps in 1962. Dr. Zamel has the entire collection of stamps issued by Tristan and illustrated many of the island's features with some of their rare postage stamps.

The 301 inhabitants of Tristan da Cunha have one of the highest rates of asthma in the world. Asthma is not a monogenetic condition; several genes are involved.

Tristan da Cunha is part of an archipelago along with Inaccessible and Nightingale Islands but only Tristan is inhabited. It is 100 square kms. surrounding a large extinct volcano, Queen Mary, but only two square miles are flat. Three hundred people live in 90 houses in the small settlement of Edinborough.

In 1816 the island was occupied by a battalion of British soldiers and in 1817 they withdrew. But Corporal William Glass decided to settle the island with his wife and, ultimately, 16 children. There are seven family names on the island but everyone is, in fact, related. The origins of the original seven are three by free will, four by shipwreck; one Scot, one English, one Dutch, two American and two Italian.

In 1961 a small volcano sent all inhabitants to South Africa and thence to Britain for refuge. British researchers studied the then 275 people in 1962 for every possible genetic factor. A history of asthma, a hereditary condition, was given by 49% of the people. After 1 ½ years of exile, 269 people, most of whom hated British weather, returned to Tristan da Cunha. Six remained in the U.K.

The island lacks an airport and it takes a week to sail from Capetown. The usual way is to take a fishing boat but Dr. Zamel was fortunate to go by *Agulhas*. This is a South African icebreaker which goes to Antarctica yearly via Gough Island and Tristan da Cunha. He had a very rough crossing with waves breaking across the bow the whole time. On one occasion, they were only two degrees away from capsizing. To disembark one is put in a cage and dropped onto small launches. On arrival, you are greeted by a sign saying "Welcome to the Loneliest Island".

Indeed it is a most remote place, but the view from the top of the volcano is quite spectacular. It is very windy and rains 30% of the time; the scenery is of green vegetation and black lava. February is summer so many of the islanders take a three week camping trip over to Nightingale Island, an uninhabited bird sanctuary. All administration is dictated by government council composed of a British administrator and an elected council. The administrator and the physician are the only foreigners on the island.

Postage stamps and lobsters are the basic export industries on the island. Sales of these bring net net revenue of ½ million each or \$3,000 per person. Islanders are self-sufficient in potatoes, vegetables and mutton. Everything else comes from Capetown. The island has one policeman who does nothing because everybody knows everybody so crime doesn't pay. A diesel motor in the lobster factory provides electricity for the community. Bottled propane gas is used for heating and cooking. Everybody is employed although that may be at several jobs, so there is no unemployment. It is close to Utopia! There are forty fishermen (two to a boat) but the weather only allows them to leave the island about twice a week. There is no TV and the one telephone belongs to the administrator.

Islanders love to dance and every Saturday night they dance to the music of a live band. The famous Post Office is open every day but a letter could wait for up to four months before being mailed. It can take 6-10 months to get a reply. There are no trees on the island so wood and furniture imported from Capetown are very expensive.

The level of inbreeding is incredible. At a wedding of two people named Green, on average, everybody was a cousin to everybody else fifty different ways. The inbreeding has resulted in look-alike people with cartoon features including a prominent overbite. Life expectancy on the island is high and health care is very good except for emergencies.

Dr. Zamel went twice to Tristan—in 1993 and 1996. Everybody over the age of seven on the island collaborated in his study. In 1996 he went with three technicians and three tons of supplies. He left blood collection until the last day before departure. The preservation time limit for DNA is 12 days. The blood travelled seven days on sea and two days by air from Capetown to Toronto. On the last day all 270 subjects gave blood; it was collected at the rate of one donor every five minutes. Photographs taken then of a smiling Dr. Zamel are misleading. On that day he had the misfortune to pass a large kidney stone (½ cm.) and so dosed himself with quantities of morphine to survive.

On the final evening, the community held a big dance and everyone won a prize—for the biggest and smallest lung capacities, best blow, oldest participant, etc. The next day the *Agulhas* was calling and everybody came to bid farewell. Strong friendships had developed and emotions were high. The sea was so rough they took the ship's helicopter out. The cargo went directly into the ship's refrigerator. On arrival in Toronto, the DNA was rushed to Mt. Sinai Hospital where a dozen technicians were on call to extract the DNA. Dr. Zamel noted that it was quite suspenseful to take 270 samples to Toronto in time but the good news was that nothing was lost. He now believes they are about to discover the first gene of asthma.

Over 50% of the inhabitants of Tristan da Cunha have evidence of asthma. This is a rate ten times greater than that of Torontonians. The islanders are now issuing a postage stamp which will commemorate the role they played in the search for the gene of asthma.

In answer to questions, Dr. Zamel pointed out that the high incidence of asthma was the best example of inbreeding complications. Several people on the island had extra fingers but only two individuals had some mental retardation.

The islanders don't like strangers because they realize they look different. Strangers bring influenza and some reporters have misrepresented them. As a result it is very difficult to get permission to visit the island. Dr. Zamel's application was rejected three times. He succeeded in getting approval only after he spent six months preparing a video to promote his cause.

Islanders are British subjects but not British citizens. It is fortunate for them that they prefer their life there as they have neither professions nor money to emigrate anywhere.

Bruce Falls thanked our speaker for this very intimate view of a fascinating island.

Member's Notes and Field Observations

- Jock McAndrews reported on the Butterfly Conservatory at the Horticultural School in Niagara Falls. There are 2000 free flying butterflies of 40 species. Weekends are crowded with parents and children and weekday mornings seem best for viewing. There will be an outside wild butterfly garden in the summer. At the moment the staff do not seem to be very helpful.
- Hugh Currie pointed out that there were 5-6 owl species on Leslie Street spit including 3-4 Boreals. These now out-number Saw-whets in many areas.
- Keith Reynolds discussed a Minden bird feeder which was attracting great numbers of Snow Buntings. When alarmed, the birds flew up to the TV tower.
- Bill Carrick attended a Trumpeter Swan conference at St. Louis at which he presented a paper on the history of accompanying birds in flight with an ultralight aircraft.
- Ron Scovell noted that House Finch numbers were down drastically. Newcastle Disease did not seem an adequate explanation as he rarely observed any finches with eye problems.

Meeting Adjournment: 10:10 pm

Meeting Recorder: George Bryant

NEXT MEETING:

The 920th meeting of the Brodie Club will be held on March 18th - Room 430, Ramsay Wright Bldg., U. of T.

SPEAKER: *Dr. Ken Abraham*

SUBJECT: *Snow Geese in the Hudson Bay Lowlands*