



FEATURES

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Two passions in flight

In ornithology, as in neurology, one is driven by "curiosity and meticulous attention to detail," says Dr. Henry Barnett

By CELIA MILNE

One winter day when Henry Barnett was 12, he decided to skip Sunday School and instead go for a walk at the edge of Lake Ontario near where he lived. He was strolling along beside a marsh at the foot of Leslie Street in Toronto when he saw two men with binoculars staring upwards. "What are you looking at?" he asked them. They pointed to a small, brown-streaked finch with a yellow bill. It had successfully impaled a mouse on a hawthorn tree. "It's a redpoll," said Jim Bailey, one of the men.

Transfixed, the three began to talk about the habits of birds, and from then on, the boy, now Dr. Henry Barnett, was utterly hooked on ornithology. He became a good friend of Bailey's and an avid bird watcher. Bailey, who was a scientist at the Royal Ontario Museum, taught Dr. Barnett to ask himself, "Is this correct?" "Is it scientific?"

That day in 1934 was pivotal for Dr. Barnett because it defined how his life would be spent. Little did he know back then that he would become internationally famous in stroke research.

But that February day observing the redpoll in the marsh was a foreshadowing. He wouldn't spend his life in places like church, where he was expected to be. He would spend it questioning popular wisdom and traditional behaviours. He would spend it in the outdoors and in laboratories, seeking scientific accuracy and never calling something true unless it was absolute.

Dr. Barnett's list of achievements is impressive. He is best known for directing multi-centre clinical trials of stroke treatments, some of which changed the course of history. He has written 115 book chapters, 231 papers and 10 books. He was founding president of the Canadian Stroke Society and editor of the American Heart Association journal *Stroke* from 1981 to 1986. He co-founded the department of clinical and neurological sciences at University Hospital and the John P. Robarts Research Institute in London, Ont. In October 2003, he

received Canada's highest honour for lifetime achievement, the Companion to the Order of Canada.

"I was born with an enormous amount of energy," he says, without arrogance. "And," he adds quickly, "I married a woman who was patient and tolerant." Dr. Barnett and his wife, Kathleen, have four children and 12 grandchildren. He remembers weekend trips they made as a family during his workaholic stage. While Kathleen drove the car, Dr. Barnett would have four separate dictating machines going: one for the department, one for research projects, one for developments at Robarts and one for the journal *Stroke*.

"I admit to having been excessive in my work habits."

In his spare time, Dr. Barnett avoided sports, at which

he was "inept," but instead stood in swamps and looked at birds. He says this pastime is common among neurologists. In ornithology, as in neurology, one is driven by "curiosity and meticulous attention to detail."

"In ornithology, it's pattern recognition, which is what neurological diagnosis is all about. It is the same brain set, the same way of looking at things."

Dr. Henry Barnett was born on Feb. 10, 1922, at Newcastle upon Tyne, England. His family moved to Scarborough, Ont., when he was five. A year after meeting Jim Bailey, when he was 13, Dr. Barnett was all set to go into a career in ornithology. His father, a rigid Irishman and clergyman, didn't think he could make a good living in that science, and talked him into medicine.

Dr. Barnett received his medical degree at the University of Toronto in 1944. He spent summers working in pathology, a specialty he was interested in pursuing. He remembers one of the pathologists opening up a brain for him. "It was very impressive to a young guy to see tumours and abscesses on the brain. Back then, penicillin wasn't available," he says.

The Second World War was on, and it was only because there was a shortage of neurologists that he agreed to do specialty qualifications in neurology at the Toronto General Hospital. After that, he went to Oxford University for further research training. Technol-



An avid birder with a keen eye for the sciences, Dr. Barnett remembers taking weekend trips with his family while his wife drove and he zealously worked. "I admit to having been excessive in my work habits," he says.

ogy was just being introduced at the time that allowed doctors to see inside the arteries of the brain. "Instead of guessing whether there was an aneurysm, you could see it. It was an exciting time." He decided the best field for him was stroke, and his career took wing.

When Dr. Barnett returned to Toronto, his colleagues couldn't believe his choice. "People said, 'Why go into stroke? You can't do anything for them.'"

But he remembers thinking, "That's the challenge. We don't know how to prevent or treat stroke."

And he's proud of his contribution to the turnaround. "In the end, in my lifetime, stroke prevention has become an everyday occurrence."

A short list of Dr. Barnett's friends and colleagues reads like a Who's Who in Canadian neurological research. One of his dearest friends was neurosurgeon Dr. Charles Drake ("Charlie"), who became famous for developing a method of operating on basal aneurysms, which previously had been untreatable. The two doctors lived two doors away from each other in London. They fished together. They saw each other's patients. Dr. Barnett's daughter married Dr. Drake's son. Dr. Barnett was at his friend's bedside when he died in 1998.

Their working relationship began in 1969, when Dr. Drake per-

sueded the board of governors of the University of Western Ontario to form a new department of clinical neuroscience, incorporating neuroradiology, neuropathology, neurosurgery and neurology. Dr. Barnett moved his young family to London so he could run the neurology department.

While Drs. Barnett and Drake toiled away in London, other colleagues—who would later become Canadian Medical Hall of Famers—were zeroing in on the mysteries of stroke. Dr. Fraser Mustard was busy at McMaster in Hamilton, studying the role of blood platelets in thrombosis. He was looking for drugs that could

idea Aspirin can prevent stroke. We found it was 25% better than nothing." Results of the study were published in 1974, and Aspirin began to be used regularly to prevent heart attacks and stroke. Dr. Barnett became a sought-after principal investigator. "That set me off on a career of being able to do trials."

Dr. Barnett's next blockbuster result came when he put together a study for the National Institutes of Health (NIH) looking at the success of a surgical procedure called carotid artery bypass surgery to prevent stroke. At the time, 1,500 had been done, at about \$15,000 apiece. He put together a nine-year, \$9-million trial involving 70 centres on three continents and found the procedure was not effective. "The neurological world was outraged."

There was a big hoo-ha. "That made me famous and infamous," he says. "My blood pressure was up for years." Ever since, Dr. Barnett's relationship with surgeons has been awkward, and "it has never really healed."

Dr. Barnett tells an anecdote that illustrates how unpopular he was as a result of that trial. He was having dinner in Johannesburg and a stranger came in and introduced himself as a surgeon. He brought his wife over to Dr. Barnett's table and said, "I'd like you to meet the man who put an

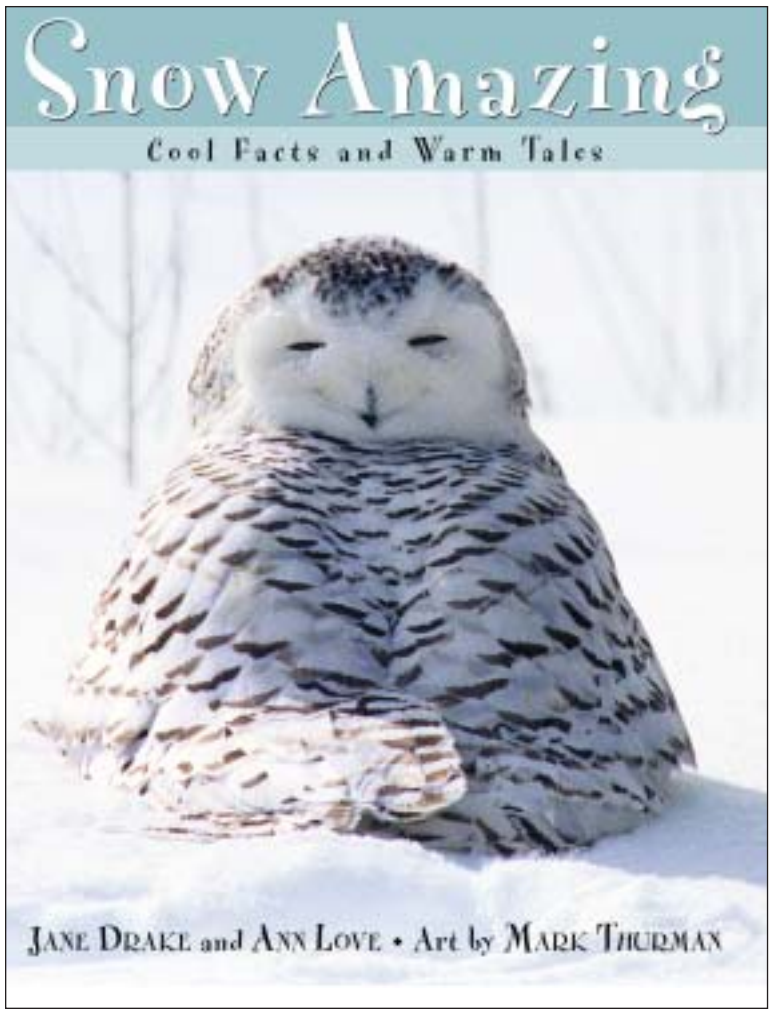
"People scoffed. They were scornful of the idea Aspirin can prevent stroke."

inhibit platelet activity. Meanwhile, Canadian physician Dr. C. Miller Fisher, working at Harvard, observed narrowing of the carotid artery caused stroke. He described clots that were a warning sign for transient ischemic attacks (TIAs).

When Dr. Mustard thought he had found a drug that would alter platelets, he got in the car and drove to London to see Dr. Barnett. "You have to prove this drug works," Dr. Barnett remembers him saying.

They put together the world's first randomized clinical trial in stroke prevention, and one of the drugs they tested was Aspirin.

"People scoffed," said Dr. Barnett. "They were scornful of the



Cover of Snow Amazing © 2004 Jane Drake and Ann Love published by Tundra Books, Toronto

Stroke specialist advocates 'paddling one's own canoe'

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end to a billion dollar business."

Despite the hullabaloo, Dr. Barnett's reputation for doing high quality studies was soaring. Next, the NIH asked Dr. Barnett to look at carotid endarterectomy, to find out who should have the procedure. He put together the North American Symptomatic Carotid Endarterectomy Trial (NASCET)—the largest NIH-supported trial to be held outside the U.S. There were 3,000 participants on five continents and it took 11 years.

"I shouldn't say this," he says, laughing, "but it was damn well done!"

The study found endarterec-

tomy is effective in patients who have both symptoms and severe narrowing of the arteries, and spelled out the circumstances in which the procedure is beneficial in those who are less sick.

The main results were published in the *New England Journal of Medicine* and the *Lancet*. Dr. Barnett calls publication of these results his "proudest moment medically." He is still working on manuscripts from those data.

Dr. Barnett believes that in order to explore uncharted territory, one needs to have a great deal of independence from existing hierarchies, to fly unencumbered.

"I'm a believer that if you have

your own agenda you can effect it in its completeness without having to refer to some other regulatory body."

Dr. Barnett would not want a legacy like that of Quebec explorer Pierre Gaultier de la Vérendrye, who set out in the 1700s to find a western sea and only got as far as Manitoba. Dr. Barnett says the problem for De la Vérendrye was the problem of his exploration—how many canoes he could take, where he could set up forts, etc.—were conceived in Paris and the explorer had to obey. Dr. Barnett believes in free enterprise, in "paddling one's own canoe" to get to the destination.

"That was my gospel. I didn't want De la Verendrye syndrome."

Insisting on independence is not always popular. One of the lowest points in Dr. Barnett's career was the criticism he received while conceiving the Roberts Research Institute. The vision of the founders was of an independent research centre, and they raised the money themselves. "There was an enormous outcry from the (University of Western Ontario) medical school. The dean was very, very unhappy with me. In the end, it was dead right, but it still isn't a perfect relationship."

A demand for autonomy doesn't mean Dr. Barnett works alone. He appreciates the importance of teamwork and surrounding himself with people of integrity. He is the man credited with marrying the words "heart" and "stroke."

Back in the days when there was a Canadian Heart Foundation, Dr. Barnett was hard at work establishing the Canadian Stroke Society. The two bodies competed aggressively for research money. Then, the heart people asked Dr. Barnett to join them, and the two were merged under the Canadian Heart and Stroke Foundation.

Provincial foundations followed suit, and the two elements are now merged countrywide.

Dr. Barnett's contributions to the world of stroke are lasting legacies, like many feathers in his cap. Future generations of researchers will follow his path to find "what's right, what's true."

Calgary stroke researcher Dr. Michael Hill, who won the Henry J.M. Barnett Scholarship in 2001, said: "Dr. Barnett's work is the foundation on which Canadian stroke researchers and physicians are building new discoveries and treatments."

At 82, Dr. Barnett's life is much quieter than it used to be, and he can pursue his other passion, observing birds in their natural habitat. He and Kathleen live in the countryside about an hour north of Toronto. He loves to grow vegetables and flowers and visit with his family.

On the late winter day he spoke to the *Medical Post*, he saw redpolls at the bird feeder just outside his window. He lives on the beautiful Oak Ridges Moraine, which is protected by law from development. "Nobody can ever do anything in that forest, ever."

Of that, as of other things, he is certain.

Celia Milne is a senior staff writer.

Dr. Barnett photographed this snowy owl for the cover of "Snow Amazing" (left) a book written by his two daughters that is dedicated to him for cultivating their passion for nature from an early age. Dr. Barnett's daughter Jane married the son of Dr. Charles Drake, who was famous for developing a method of operating on basal aneurysms, and who was a respected colleague and close friend of Dr. Barnett's.

ALTACE ramipril

PHARMACOLOGY CLASSIFICATION:
Angiotensin Converting Enzyme Inhibitor

ACTION AND CLINICAL PHARMACOLOGY:
ALTACE is rapidly and completely converted to its active form, ramipril, which is the principal active moiety.

INDICATIONS AND CLINICAL USE: *Control of Hypertension* ALTACE is primarily indicated in the treatment of essential hypertension. It may be used alone or in combination with thiazide diuretics. ALTACE should also be used in patients with congestive heart failure in combination with a diuretic. ALTACE should also be used in patients with myocardial infarction. The safety and efficacy of ALTACE in the treatment of patients with congestive heart failure has been established in a large-scale clinical trial. The safety and efficacy of ALTACE in the treatment of patients with myocardial infarction has been established in a large-scale clinical trial.

MANAGEMENT OF PATIENTS AT INCREASED RISK OF CARDIOVASCULAR EVENTS: ALTACE may be used to reduce the risk of myocardial infarction, stroke, and cardiovascular mortality in patients over 55 years of age who are at high risk of cardiovascular morbidity and mortality. ALTACE should be used in combination with a diuretic.

CONTRAINDICATIONS: ALTACE should not be used in patients with aortic stenosis, aortic regurgitation, or mitral regurgitation with aortic regurgitation. ALTACE should not be used in patients with aortic stenosis, aortic regurgitation, or mitral regurgitation with aortic regurgitation.

CAUTIONS: ALTACE should be used with caution in patients with renal impairment. ALTACE should be used with caution in patients with renal impairment. ALTACE should be used with caution in patients with renal impairment.

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patients experiencing cerebral infarction. The following are the results of the study:

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