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OIL as a global affair

BY WYNNE THOMAS

Over the past months a seductive wind has been blowing out of the Middle East, whispering the imminent collapse of the Organization of Petroleum Exporting Countries (OPEC) and promising the West a speedy return to the halcyon days of plentiful and assured supplies of cheap crude oil.

Indeed, to judge from recent headlines in some of the more popular journals of opinion the battle is as good as won: "How We Beat OPEC," "The Energy Crisis Is Over!" "An End to OPEC". "Can OPEC Survive the Glut?" A writer in one American magazine solemnly assured readers that a single act — President Reagan's decontrol of oil prices — had ended the energy crisis of the 1970s.

A combination of high inventories in consuming countries and declining demand affected the world oil market in 1981 and the early months of this year, forcing progressive cuts in some OPEC prices and a reduction in production among a number of its member countries.

But many seasoned observers, both inside and outside the oil industry, believe that to assume, on the basis of such evidence, that the world's oil problems are solved not only constitutes a serious misinterpretation of current facts but totally ignores the hard-won political lessons of the past decade. Writing in the authoritative American business magazine Forbes, executive editor James Cook noted recently that: "...the most dangerous thing in business and in investment is to draw long-term conclusions from short-term happenings, and in that respect the idea that the oil crisis is over will go down in history as the great oil swindle of 1982. Don't blame OPEC; we are really swindling ourselves with this delusion."

For countries such as Canada, which will remain dependent on imported oil until at least the end of this decade and probably longer, it could turn out to be a very costly delusion. Not all the oil that Canada imports comes from OPEC countries. In recent years it has been supplied, in part, by non-OPEC Mexico. But the bulk of its imports come from Venezuela, which was a founding member of OPEC, and from various other OPEC countries in the Middle East.

The first time most people became aware of OPEC was in 1973, when it sent shock waves rippling through the economies of the western oil-consuming nations by quadrupling the price of oil produced by its member nations. In fact, the organization had its beginning more than a decade earlier. Before then, Middle East oil had been produced under concession agreements between various oil companies — mostly American and British — and the individual countries concerned. In effect, profits were shared between the companies and host governments, after substantial discounts had been granted by the governments to promote the rapid development of production.

Such incentives worked only too well. By the late 1960s there was a glut of Middle East oil on world markets, and the companies were forced into widespread price-cutting, reducing both their profits and those of the host countries.

The latter were unsympathetic. In 1960 representatives of Saudi Arabia, Venezuela, Iran, Iraq and Kuwait met in Baghdad and declared that they could "no longer be indifferent to the attitude adopted by the oil companies in effecting price modifications..." They also decided to "form a permanent organization called the Organization of Petroleum Exporting Countries... The principal aim of the organization shall be the unification of petroleum policies for the member countries and the determination of the best means for safeguarding the interests of member countries, individually and collectively."

It was a resolution that OPEC (with a membership that was eventually to grow to 13 countries) was to pursue with determination, although throughout the 1960s it was content for the most part to maintain stable revenues. For most of this period, available supplies of oil in the U.S. and other non-OPEC countries were an effective deterrent to OPEC increasing prices unilaterally.

By 1970, however, the market had changed in one very significant respect: the world had become increasingly dependent on oil as an energy source. In 1950 oil had accounted for about 10 percent of the total energy consumed in western...
ministers decided to set the ceiling price of their better-quality crude, at $32 (U.S.) a barrel and by 1981 to $34 (U.S.).

It seemed that there would be no end to spiralling oil prices — but there was. In late 1981 and early this year, OPEC oil producers, for the first time in more than a decade, found themselves in a buyers’ market. The result: a decline in the consumer nations to the succession of OPEC price hikes.
The open road

BY ROBERT THOMAS ALLEN

Often when I sit in front of TV, watching cars leap over broken bridges or one another, or skid through garbage pails and explode; I see myself sitting behind the wheel surrounded by egg-salad sandwiches, strip maps, kids, love, dolls, crayon books, sometimes the family car and find myself recalling the unique joys of family motor trips. I remember, for instance, the lovely feeling of all doing something pointless together at 11 o'clock on a sunny morning, say stopping at a shell shop someplace near the ocean where the salt crystals shimmer in the air, mosquey around the tables, row and then one of us holding up a shell and calling softly, "Look at this one," in the drowsy voice of someone experiencing about as pleasant a moment as life has to offer.

I probably did more family driving than anyone in Canada, or North America, maybe in the world (I was a free-lance writer, or trying to be, and was able, in theory, to live anywhere). Our kids loved motor trips and never wanted to stop. They'd urge us to drive another 100 miles, or 90, anything to prolong the day and see more of the world, and if we let them talk us into it and said we'd go on to Shoshone or Pecos or Tunamcari or El Paso, they started singing. We all stared singing—songs like "This Little Light of Mine, I'm Going to Let It Shine" or "I'm a Peapod Short and Stout," in harmony, watching the tumbleweed drift across the highway in a golden light of late afternoon or the moon rising over mountain peaks. Sometimes my wife and I would get into the spirit of just driving on forever, not trying to reach any place at any particular time, and turn off the highway onto some beautiful stretch of desert and get out, and we'd all wander off in different directions, but still be close enough to wave and to hear, in the still air, the special sound of kids let out of the car for a few minutes, an expression of the secret, private joy kids feel when they've stopped for a little while but know they're still going somewhere.

I heard that sound one day last summer down around Toronto's harbor, when a fresh wet wind from the bay was rustling the poplars—a sound coming from near a parked car the other side of some shrubs—and I stood there just to listen to the children's voices, trying to look as if I'd just thought of something very important. And indeed I had, for I suddenly remembered the morning we saw Lake Nipigon at dawn, the four of us standing on the shore watching the waves and breathing the fragrance of white water and timber; and I remembered the very feel of the evening we saw Lake Louise for the first time, just as a recording came on a jukebox somewhere of Mario Lanza, a big favorite of our daughters at that time, singing "When You Are in Love It's the Loveliest Night of the Year," and I can see their expressions yet, as if a faint breeze could have waited them up over the Rockies and into outer space.

I doubt if many people today in their mid-forties or younger realize that the first long-distance motor trips were just slightly less wonderful than going up in an airplane, in its boyhood and youth we were still a bit amazed by the automobile simply as a powerful device that moved by itself. That you could keep on going in one for days was a miracle of technology that we just began to realize around the mid-1920s. Much earlier than that, men, and an occasional woman, made long, desperate cross-country trips and took some another's pictures posed

Memories of those motor trips of yesterday

ILLUSTRATIONS BY KEN DALLISON

ROBERT THOMAS ALLEN

ROBERT THOMAS ALLEN
beside their cars, axle-deep in mud near Calgary. But the first person I actually knew who took long motor trips was my brother, and he and I were always driving about our street in a house with fat veranda pillars and hanging ferns and who had always been a bit of a go-getting dynamic man of the times whose head had vibrated loose from his shoulders the night before the day of the annual meeting of the slogan "No Green Hands in My Shop." He talked about the 1940s people started to get the idea that you could actually reach some far-off place you'd heard of but didn't think you'd ever see. He claimed to have run such a track in his car around the block in Winnipeg or Pittsburgh for instance, if instead of turning around after five or six miles and getting back home in time to water the front lawn, you kept on going for five or six days. Stopping overnight at tourist cabins was a novel idea that people thought of in something the same way they thought of the new highway advertising signs, on which you could read, for instance, poems about somebody's shaving cream — kind of fes-
vitive and foolish, symptoms of a world gone suddenly mad in a delightful way. That feeling about highways, of course, isn't just a passing fancy; it's actually a very important thing. I went, meaning to water the grass and get a Salvation Army tin for the coffee mug I always carry and the back scraper I keep behind my spare tire. And I always enjoy that serene, peace-
ful moment of taking a last look around the motel room before leaving to go back into the world, perhaps with hundreds of other mountings when I've done the same thing, like taking a last look at an old friend — the run-down bed, the pictures, the Swiss mattress, the Good News book, the knickknacks, the sun shining on the air-conditioner, a feeling of peace and privacy and ano-
ymity, the feeling of being very alone, very anxiously, from below, "Are you all right?" worried that maybe I've got the kids alone, and I'm going to be alone for a long time sometimes stop me in whatever position I happen to be in, as if I've been harpooned. A feeling of being alone, not exactly by memories but by a kind of instant awareness of scenes we saw there, the same room for a week, the same table, the same beds. I still like motor trips. I sometimes grin more about starting on one, due to the inertia of advanced years, but there's a certain point — maybe when we've stopped at some busy highway parking place and we're sitting in our car having hamburgers, with that pleasant feeling of not knowing exactly where we are, watching a couple of boat-tailed grackles flapping for bits of bread, skidding sideways in a here-on-the-boost of our car and look-
ing in at us with golden eyes, sur-
rounded by the activity of school kids, women with babies, electricians on their lunch hour — when I get the feeling of somehow being at the
wake me to look at one of our old road maps (which she has marked up from former trips with things like "Do not stop at Gourment's Delight! Poor food!" or "Avoid Shangri-La Motel. Overpriced!").", and when I wake we're driving under last year's Christmas decorations in some town we haven't seen for maybe 55 years, when we saw our first cotton blowing off a mule cart. I smell supper cooking as we drive past houses with verandas, amid kids, dogs, close enough to the curb to glance in through the open door of a grocery store like a friendly cave, where a woman at the counter is talking to a customer in pink curlers.

like the neighborhood of old tour-
ists stopped for the night. "The long-
est way is the sweetest way home," a tavern owner told them, "the way the dust, laughing, on our last trip, as she followed behind her husband, a tall and straight-shouldered man in plaid pants who was barging around the wrong end of a motor, headed for town. The motor had another something she used to say on the leafy lanes of long ago. Another man explained his problem of the electric light bulb, because the lamps in motel rooms often weren't bright enough, and if we drove by, he'd say, "Hey, there, "We've been asleep the way a cat has missed a bypass, not wanting to

One of the strangest occurrences in our family took place when my brother had left to live in Kansas City and I was helping my mother move out of our house to get a divorce. I think we were just about to have a meal in her car last Sunday night, back from some far-off place such as Bowmansville, standing in the steeped light from a street lamp that was almost hidden by the leaves of a maple tree. The first driver in our family, and one of the first in the neighborhood, was my brother, who today, at 75, is still a keen-eyed and enthusiastic motorist and still writes about trips he and his wife go on, to Santa Barbara or Denver. And although he ac-
tually say so, you know from the tone of his letters that he still thinks the automobile is one of the marvels of the modern age and that it was a bit of luck to be born after its invention. "It's a wonderful thing to see the world's biggest fig tree." He often adds, "We didn't have any tire trou-le, a carry-over from years of driving. We used to say, "We didn't have any tire trouble." The way today, evidently, we didn't "You call it snow." Making a trip without blow-
outs was an experience that you were grateful for but didn't expect to have very often, if ever.

My brother's first car was a Ford coupe, and he made one great long-distance drive of our neighborhood in 1929, when he took us on a trip to his home in New York, Montreal and back, two long days each way, with a stop at a hotel some-
where in Pennsylvania. The third day he and I and my grandmother and a cou-
ples of neighbors went out to the curb to watch when they started to leave, and we saw her, my mother, a very neat young, wearing a tweed peaked cap precisely level on his broad forehead and a black fedora and how neat an old fashion hat forward, giving us a little salute of formalism, with one hand on the ster-
ring wheel instead of starting out for a walk.
A sulfurator—a kind of sulfur vaporizer—is more evidence of the attempts to control the dreaded cholera epidemics. When the disease struck York (now Toronto) in 1832, it swept away 600 people out of a total population of 5,500. Bodies were buried at night in pitch-fined coffins beneath 15 centimeters of lime. Finally, in 1855, Dr. James Snow of London, England, persuaded the world that cholera came from drinking contaminated water and not, as some had thought earlier, a moral disease resulting from intemperance or eating oysters. For this, clergyman and respectable ladies fell victim as often as the less fortunate helped give force to his argument.

Bleeding bowls abound, relics of the belief that the body’s ills could be relieved by removing it of surplus blood. There are lancets and early thermometers, monocular microscopes and a pair of saddlebags bearing weights to the distances pioneer doctors had to travel between patients. Their lives were not easy, they did everything from treating fevers to pulling teeth, and a July 1886 story in the Globe listed annual incomes of 30 doctors ranging from $500 to a high of $2,500.

Museums, like icicles, says curator J. N. Bennett, can show only a fragment of their total, and the real work is in the selecting, evaluating, labelling, cataloguing and storage. Storage is a major concern. Because of the age and fragility of some of the artefacts, temperature and humidity conditions must be ideal—and must be variable. What suits a wooden case of medical instruments, circa 1890, is just the wrong thing for Nakhk, the 3,200-year-old mummy in the museum’s Egyptianology section.

Another portion of the museum is devoted to the pediatric collection of Dr. T.G.H. Drake, known for his work at Toronto’s Hospital for Sick Children and as co-developer of the familiar baby’s naughtab. Dr. Drake was an ardent collector of objects used over the centuries in the care and feeding of the young, and of coins, books and furniture. After the doctor’s death in 1954, he presented the collection to the museum.

Brandon, Man., is the home of an umbrella medical museum where in 1972 the Brandon Mental Health Centre and the Manitoba Historical Society combined forces to mount a display tracing the treatment of mental illness over the past nine decades.

Originally constructed as a boys’ reformatory in 1890, for an entire year the building housed only one inmate. The child, whose parents were Red River settlers, was charged with the crime of stealing a letter from Her Majesty’s Mail. Evidently concluding that it was not practical to maintain a building and staff to look after just one prisoner, authorities converted the facility to care for mentally ill Manitobans. In 1940 the brick and wooden structure burned to the ground. A photograph, under glass, shows patients moving to the Winter Fair Building, where they were housed until 1912, when the present building was completed and ready for occupancy.

The museum is open to the public on Tuesday and Thursday afternoons. School groups tour occasionally, as do nursing students, who get a firsthand look at the tools their predecessors had to work with. There are a variety of restraints used for violent patients, including leather straps and anklet cuffs, straitjackets, beds with cages over them, and cumbersome machines for giving electroshock treatments.

The hospital was almost self-sustaining in its early years, doing its own printing and raising cattle for food and for show. Some of the smaller equipment used in the barns to care for the animals is on display, as well as the prize ribbons carried proudly home. Touchingly, some possessions of early patients remain—cobble’s stand with lasts for making shoes and a sachet of the fine instruments used by a jeweler for making rings.

Mannequins dressed in the changing styles of nurses’ uniforms perambulate over nursing stations, the most up-to-date dictiona phones of the day ready to hand, and the walls are lined with group photographs of staff members over the years. A prize possession is the front page of the now-defunct Winnipeg Tribune, from the year 1900, with a reference to what was then called the Brandon Insane Asylum.

Some of medicine’s greatest advances have taken place in times of war, and military medicine has its own museum at Toronto’s Fort York. At the little garrison established in 1793 by Lt.-Gov. John Graves Simcoe, now only a stone’s throw from where the Gardiner Expressway slices its
A Limb for Man and Beast

The best embrocation of the world for

Yellow Wrapper for Animal and White for Human Flesh

Above, patent medicines, below, weights and scales from Quebec.

way through the city, eight of the original buildings still stand; in one of them, the history of wartime medici-
cine can be followed.

Without the miracle drugs we have today, amputation was almost the only choice for patients with gangrene of the toes and ankles and legs. While a good surgeon could cut off a limb, sew up the flap of skin and dress the wound, the pain of amputees was terrible, if not intolerable. Infection, showing itself by what was called "lubal pus," was therefore a major concern. When a limb was amputated it was often done with the patient on his feet, because it was believed that digging out musket balls would be more successful if the soldier held the position he was in when he received his injury.

The feelings of a military doctor were movingly described by William "Tiger" Dupuytren, later founder of Goderich, Ont. He came to Canada in 1813 to serve as assistant surgeon to the 85th Highlanders. In a letter written five years later, the war he wrote: "There is hardly on the face of the earth a less enviable situation that a surgeon in China. But how glad am I to stand at the end of a battle — worn out and fatigued in body and mind, surrounded by suffering humanity — yet, although he knows it is not in his power to heal or even to assuage. While the battle lasts these past memories will come before the medical man afterward in all their sorrow and horror, so as to heighten the excitement of the 'healy fight.'"

The military surgeon, often from a humble background, was an archetypical character, expected to be simply a mechanic, and his suggestions for improvement of the condition of the armed forces were usually ignored by aristocratic "regular" officers. According to Wellington, "He was neither a soldier nor a gentleman." His observation was literally apt in the case of Dr. James Barry, who served for many years in York's drills. A graduate of Edinburgh University, Barry triumphed over all opposition to impose rigorous hygiene at British military hospitals, coming to Canada in 1857 as inspector of public health for Upper and Lower Canada. Only after Dr. Barry's death in 1866 was it discovered that the man behind the mask was a woman, the first female doctor anywhere in the British Empire.

The heroic endeavors of Florence Nightingale to ease the lot of the wounded soldier are shown here, too, as well as the experiences of unknown soldiers and their doctors. The time of the Napoleonic Wars to the end of World War I. For young visitors who throng the building for two minutes, even with a bottle of rum to ease the pain the soldier must have found there a terrifying and incomprehensible reality. Infection, showing itself by what was called "lubal pus," was therefore a major concern. When a limb was amputated it was often done with the patient on his feet, because it was believed that digging out musket balls would be more successful if the soldier held the position he was in when he received his injury.

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The building stood abandoned for seven years until in 1971, under the auspices of the Ontario Heritage Foundation and the Ontario College of Pharmacists, combined with the expense of the restoration architect

Architect Stokes, it reopened as a museum portraying a typical 19th-century pharmacy. Since then more than half a million people have lingered over the displays, fascinated by glowing apotheoery jars around the walls, the old-time cash register and the myriad mysterious pieces of medical apparatus.

Architect Stokes installed three large, electric-powered crystal chandeliers, faithfully copied of the original gasoliers, and laid a strip of carpeting around the room to protect the wide-plank flooring from the damage wrought by thousands of feet. He had found that several of the glass doors would become so cold that the flies would line the walls, but fortunately they were not lost, a former employer had taken them home to use as cold frames in her garden when the apothecary closed. With their return the final note of authenticity was struck.

Early pharmacists used mortar and pestle, ointment mixers and mills for pulverizing crude drugs to mix exactly the medications called for, working with huge shipments of bulk drugs ordered a year ahead from England. Displays of powsedek for rheumatism, prickly ash for toothache, sarapisol for coughs and lady's slipper for insomnia — all indigenious to the area — testify to a good relationship with the Indian people and a willingness to adopt their remedies. "If the Indians were taking drinking willow tea and it seemed to have a beneficial effect, it didn't take the settlers long to steal the idea," comments Jim Dunston, deputy registrar of the Ontario College of Pharmacists. "The native people had a great influence, directly and indirectly, and archaeological digs show evidence of the local grown of such medicines. But the early apothecaries probably also relied a good deal on the element of the exotic by advertising their use of imported drugs.

There is such a volume of memora-
bilia here today that there isn't room to show nearly all of it, and spilling into the back rooms are dental kits, cases of hair restorers, eye-examination kits and a library of pharmacopoeia dating back to 1807.

A rich and fascinating storehouse of early Canadian history is the museum at Quebec City's Ho
ter-Rieu, believed to be the first hospital in North Amer-
ica. It was funded by the Duchesse D'Aiguillon, a niece of Cardinal Richelieu, and staffed by the sisters of the Religious Hospitallers. The sisters set sail from France in the spring of 1639, carrying with them medical equipment and personal possessions, including their habits, cream sphere surplises and pleated wimples, wrapped in a cherrywood box. The box, now on display at the museum, had three locks, each with its own key, and was so heavy it took four men to lift it into the fishing smack that carried it on the last leg of its journey from Tadoussac to the Isle of Orléans.

In the seven rooms of the museum are displayed a priceless collection of antiquities: silver, chairs, tables and desks from the region of Louis XV; a series of miniature portraits by Rubens; the only known authentic portrait of St. Francis de Sales, attributed to the painter of the crucifix by Van Dyck. These are only a few of the treasures acquired and saved over the three centuries of the hospital's life.

Letters and papers in the hand of Michel Sarrazin are of particular interest to historians and students. Dr. Sarrazin, who became surgeon-major to the French troops in Canada, came to the hospital from France in 1665. He returned to his homeland nine years later to take a degree in medicine and to accept the title of the King's Physician but later came back to New France, where he died in 1734.

In his book Medicine for Ontario, Dr. Charles M. Godfrey quotes Dr. J.A. MacFarlane: "In medicine, per-
haps more than in other fields, there is practical value in understanding the main outlines of one's lineage and the special contribution of its component parts." Each of these medical museums, and others like them, contributes something to that knowledge and understanding and, in the process, fasci-
nates and intrigues us. We are all born, we all become ill, and eventually all we die. This is personal.
SAIL AWAY

GROWING UP AT SEA

BY DIANE FORREST

Looking down at the dark, rough waters of Lake Erie a dizzying 10 metres below, 15-year-old Jennifer Reynolds shifted her footing on the narrow wooden beam, checked her safety harness for the fourth time and asked herself if this was really the best way to spend the last days of her summer freedom.

Along with 17 other teenage girls, Reynolds had signed on for a 12-day voyage aboard Playfair, one of two 18-metre square-rigged sailing ships owned by Toronto Brigantine Incorporated, a nonprofit organization. Though the ships are used throughout the sailing season for charters and exchanges with groups such as Outward Bound, they are built principally to bear crews of landlubber teenagers looking for adventure, sailing experience or simply a novel way to spend the summer vacation.

What they get is an experience far beyond a pleasure trip on the Great Lakes. For people who have never seen these elegant ships and momentarily thought themselves transported to the days of Lord Nelson, it is hard to believe that, with the exception of discreetly supervising captains, they are briefly married and commanded by boys and girls under the age of 18.

But the aim of Toronto Brigantine, unchanged since its founding in 1982, is aptly expressed in its motto, "Building character through adventure," and to that end the teenagers perform all the duties on board: from scrubbing the galley floor to raising and lowering the massive sails and taking the helm.

Seeing a young crew at work is a striking experience for a visitor to the Toronto docks. One moment the ship is an incomprehensible mass of wires, rope and wooden beams. Then, at the back of an order, the teenagers who have been lounging on the deck leap into action. Suddenly they’re unlashing the puzzle of ropes — pulling here, unwinding there — while overhead others are swinging through the rigging, as easily as if they were walking upstairs. Within minutes, the brilliant white sails are flapping in the breeze, as the brigantine sets off on its next adventure.

And on certain days, the visitor may be surprised to see that all of the crew members are girls. When Toronto Brigantine launched its first ship, Pathfinder, in 1983, the crew was all male. Sailing tradition wasn’t broken until 1974, when the second ship, Playfair, made its maiden voyage with an all-female crew. Since then, Toronto Brigantine has had alternating boys’ and girls’ cruises all summer long, with officers of both sexes. So far, none of the disasters that would have been predicted by the original sailors on the Great Lakes have happened; the worst damage has been that suffered by male egos when a brigantine manned by boys is outstripped by an all-girl crew during one of the frequent competitions between the ships.

But sailing ships know no prejudices and demand equal work from all their crew members, regardless of sex. The sailors are divided into three watches — red, white and blue — and each of those watches is responsible for running the ship during set hours of the day. At the head of the watch is a watch officer and a petty officer — more experienced brigantine sailors who have passed safety and skills tests. The chief executive officer, usually a boy or girl with at least two years’ brigantine experience, oversees the officers and reports to the captain of the ship, the only adult and full-time staff member on board.

While on watch, red, white and blue are responsible for sailing the ship under the executive officer’s orders — at least in theory, but reality is more
chaotic for the first few days of a cruise. A brigantine — which has both square sails set across the ship and triangular sails that run lengthwise — has a total of 15 sails, which can be used in multiple combinations. As well as learning these sails and how they control the movement of the ship, the seaman must also master the bewildering maze of 54 ropes or “lines” that move the sails — stays, braces, clew lines, sheets, tacks. Then there are the variety of knots used to tie them and, perhaps most confusing of all, the new language of commands. Little wonder that first-year seamen stand stunned when a voice from the back of the ship yells, “Tack to starboard...let go and haul.” Fortunately, there are always second-year sailors to come to the rescue.

Until everyone knows the ropes, those first few days can be frustrating. Occasionally — the first time a watch is sent aloft to unfurl the fore topsail, for example — it’s frightening, even with the reassuring snugness of a safety harness. But looking back on the experience, Jennifer Reynolds says, “Now I’ve got the confidence to go into a situation where I don’t know anything and realize that by the time I’m finished I’ll be able to understand what’s going on and participate.”

For the novices in a watch, there’s a terrific feeling of accomplishment the first time they’re able to handle the yard — a change of direction that involves swinging the sails about to catch the wind — by themselves, without the pandemonium of a watch that attends the first few days. There’s plenty of work for the sailors off the deck as well, including the endless chore of keeping the ship clean. After every meal seven seamen squeeze themselves into the tiny galley to wash the dishes, and the huge tin pots used to cook the meals. Above them the members of another watch hop gingerly over the water-soaked deck and brace themselves against the rigging, as they scrub the wood or polish the already gleaming brass. After cleanup there’s more time to relax for the teenager in 12 days, he feels that young people with problems can benefit from time at sea and produces from his files a love letter to Toronto Brigantine, it was written by one of several boys and girls who have sailed on the brigantine, sponsored by such organizations as the Big Sisters and the Twin Valleys School, a children’s boarding home near London, Ont. Just how much discipline there should be on the two brigantines has been a matter of debate over the years. In the beginning, Toronto Brigantine was operated in cooperation with the Sea Cadets training program — which meant an old-fashioned formality that would have made Lord Nelson proud. But the organization’s board of directors wanted a little more leeway for fun — a time for dunking the watch officer in the cold waters of Lake Ontario as well as a time to obeying his orders implicitly. In the end, the Sea Cadets and Toronto Brigantine parted company over the issue, and now the degree of formality on board is left to the discretion of the captain. As a result, the older ship, Pathfinder, has a reputation of being more traditional than Playfair. But both retain certain customs, such as a sunset ceremony and the captain’s inspection. Naomi Chorney illustrates what, to outsiders, is perhaps the most incongruous tradition, when she bounces into the seamen’s quarters and announces that she has just squirted toothpaste all over “Mr.
Ellard. “No matter what the situation, crew and officers strictly adhere to the formality of calling the officers by their last names. As Chorney explains, “It teaches you respect for those who know better.” It’s also an indication of the difficulty and importance of learning to take orders from someone else, even if he or she is the same age or younger. But though there’s occasional muttering among the crew about the Captain’s inflated ego above them, most of the seamen admire their officers for their knowledge and ability to command respect. And as Mark Ellard points out, it’s another one of the lessons in maturity taught by the brigantine experience. “Unless you own your own business, you’re going to run into exactly the same situation as an adult. You’ll have to take orders from managers who’ve been in the business longer, and you’ll have to be able to work as part of a team.”

For the officer, there’s an extra burden: greater responsibility for directing the ship and overseeing the crew. “There are a lot of things I’ve had to do as an officer that I didn’t want to do and a lot of people I’ve had to get tough with,” says Ellard. The executive officer and his staff are essentially responsible for sailing the ship. Although the captain makes the decisions about where the ship will go, the officers have to get it there. This, too, is part of building character, explains Playboy’s captain, Dave Hughes, whose broad frame makes him look far older than his 25 years. Himself a graduate of the brigantine system, Hughes spends most of his time looking after the machinery on board, training the officers and keeping a quiet watch over the safety of the ship and its crew, only interfering when necessary. “I let the officers make their own mistakes, and I expect them to get out of them. That’s something that will help them in later life.”

Anyone who has seen the crews of Pathfinder or Playfair sailing into port, easily shifting and dropping the sails, climbing through the rigging like nimble spiders through a web, knows that Hughes’ faith is well-placed. It’s the kind of responsibility and competence that we don’t expect from people under 21. Mark Ellard, who at 19 has had guesses at his age that are four years high, takes adult prejudices with his inexhaustible good humor and tells the story of a newspaper reporter who was assigned to do a story on the Toronto Brigantine. When he found the commanding officer for his afternoon cruise was only 16, the reporter refused to go. But since it was the only way to get his story, he relented. “By the time the reporter came back,” says Ellard, “he was totally amazed by the boy’s knowledge and handling of the ship — and naturally the article he wrote was very positive.”

The success of the Toronto Brigantine depends on finding reliable young men and women who are willing to progress through the system until they, too, are ready to take command. At the end of each summer, the captains, in consultation with their officers, decide which seamen show the potential and enthusiasm to become officers, and these boys and girls are invited back to Toronto Brigantine’s off-season activities: a Thanksgiving cruise, camping trips and regular seamanship courses on the weekends. But even the kids who are enthusiastic don’t always come back. Practical considerations — homework, jobs, family responsibilities — get in the way. And some — such as Mark Ellard, who wants to become a marine engineer — have university tuition fees to look forward to.

But finding the crew for each year is only one of the ship’s concerns. There’s the onerous cost of maintaining the two ships and their expensive equipment. And there’s the challenge of continuing Toronto Brigantine’s safety record: during 20 years of sailing with approximately 3,000 young seamen, the organization has had only one fatality, for which it was absolved of all responsibility. The potential dangers of sailing are impressed on the teenagers from the moment they step on board, their first stop is Toronto Island, where they undergo a swimming test. Then it’s back to the ship for more warnings and some lessons on safety procedure in the case of fire or a man overboard.

A few sombre statistics on just what can happen to you if you fall overboard in rough weather are enough to give most kids a healthy respect for the sea.

In short, life is not always easy for the seamen, the officers or even the administrators of Toronto Brigantine. But there are a lot of compensations. First there’s the fun. Life on board a brigantine isn’t all hard work. There are games like rigging tag and stunts’ boom wrestling, in which the sailors attempt to wrestle each other off a long, horizontal post and into the shockingly cold waters. It may not be everyone’s idea of a delightful pastime, but the kids seem to enjoy it, as they do the occasional shore leaves — a chance to stock up on candy bars and potato chips and rediscover the taste of fresh milk. And since there aren’t many large sailing vessels on the Great Lakes, the ships are in regular demand for special events such as the annual Mariners’ Service near Picton, Ont., to honor those lost at sea, and, last summer, a reception held at Government Simcoe’s landing at Niagara-on-the-Lake 200 years earlier. Perhaps the most exciting event for the young brigantine sailors was the Tall Ships Parade into New York harbor during the American Bicentennial celebrations in 1976.

But most of all, there is the joy of the sailing itself. Feeling the spray on your face on a wild, wet day with the ship heeled over on its side, leaping before the wind. Being peacefully rocked in the bow in the quiet time after supper, talking about friends and teachers and old romances or maybe just reading a book. Stumbling out on the dark deck for your first night watch, with the looming shapes of the sails above you and, beyond them, the vast circle of the sky, whirled with starlight. Sitting in the bow with a watchmate, keeping a lookout for lights, listening to a slowoway cricket somewhere in the foreshore or singing softly to yourselves. Taking the helm and threading your way in the dark through a lane of freighters. Seeing your sister ship emerge over the horizon and suddenly realizing, in this mirror image, how grand your own ship must look. Singing “O Canada” and “The Star-Spangled Banner” as you come into an American port. Studiously ignoring the admiring stares of the curious who gather at the dock or roll their cars slowly along the harborside roads, tailing the ship as far as possible until it is free once more on the sea.

It is these impressions that linger for years, long after the moments of cold and fatigue are past. As Jennifer Reynolds says, “The calluses will only last a while, but the memories will be with me forever.”
Lorne Sproule was a pioneer. The memory is dimming now, for it happened in 1933. He remembers the trip across the Atlantic on the Empress of Britain — it took almost a week in those days — and the hot weather and the sidewalk cafes in the little French village where he was to spend two years. He was a young chemist then, in his third year with Imperial. The company's infant research department had come up with its first major breakthrough — a process that improved the quality of lubricating oils. He was part of a three-man team supervising the first use overseas of Imperial's made-in-Canada research. That discovery was followed by many others, and Sproule's team has been followed by many other researchers who have carried the benefits of those discoveries to nations and consumers around the world.

A hint from an expert in ancient pollen at Esso Resources Canada Limited helped locate an all well in India. Information uncovered by Calgary geologists about how oil-bearing reefs were built millions of years ago is directing drilling in Australia. A refinery in England was the first to use a new energy-saving process for treating lubricating oils developed in Sarnia. Other refineries in France, Sicily, Singapore and Japan use technologies invented by Canadians at Imperial and constantly fine-tuned and improved by them.

This international movement of technology flows steadily into Canada as well as out. It is seen in the catalytic crackers and powerformers that produce high octane gasoline in all of Imperial's refineries. Even more impressive are Syncrude's huge fluid cokers, the largest in the world.

How does all of this international cooperation come about? It is all part of an arrangement to create a pool of technology at minimum cost, for the benefit of Exxon affiliates and their customers around the world.

Through a series of research agreements, the companies can share in the cost of research of mutual interest. A key provision of each agreement is that all technology within the scope of that agreement is freely available to all participants.

But not exclusively so; the same technology is often made available to outsiders anywhere in the world through licensing and technology sales agreements.

So for Imperial researchers today, going halfway around the world to share Canada's unique expertise is "like going around the corner" (to use the words of one researcher). One manager reported that there were sometimes so many empty desks in his laboratory that he felt lonesome.

What these men and women have to share is the patient investigative skill of the oldest and largest petroleum-research centre in Canada. Imperial maintains laboratories in Sarnia, Calgary and Montreal, employs 700 people in research and spent $60.9 million in 1981 in Canada on research and development (commonly known as R and D). That is a percent of the company's value added (a corporation's equivalent of the gross national product), more than four times the over-all average for research in Canadian industry and higher than the 1985 national goal for all research in Canada.

Imperial agrees with Science and Technology Minister John Roberts that Canada needs industrial R and D. Its own record makes it understandably sensitive when Roberts says, as he did last September, that in general

"...foreign-owned firms tend to underperform in R and D compared to their Canadian counterparts." Many would disagree with that statement.

"But whether or not it is true in general," says John Tiedje, research manager at Sarnia, "it is clearly not true in Imperial's case."

Moreover, Imperial's participation in Exxon's international research program brings solid benefits both to Imperial and to Canada. Just as researchers in Imperial's laboratories are working hard to solve problems related to the Canadian oil industry, researchers at Exxon affiliates elsewhere are also developing new technologies that may apply here as well. "If it weren't for the Exxon pool of technology," says Vern Larson, manager of research in Calgary, "we would have to cover all the essential areas of research ourselves. Our money and staff would be spread so thinly that we'd never be able to make some of our most important advances."

In addition to the technical benefits, there are also notable economic ones. Even if Imperial were able to do all its own research, the cost to the company and therefore to the consumer would be much higher. Jim Livingstone, Imperial's president, notes this aspect: "Just consider the facts. Our net payment to Exxon for research and development was $16.2 million in 1981. In return for that we had access to research that cost $550 million. We think this is a very good deal, both for Imperial and for Canada."

Under this shared research program, Imperial has three main fields of investigation, or "world technical mandates," in the Exxon family. Imperial is responsible for research on the processing of lubricating oils — the substances we use to lubricate machinery — and the quality of the oils used to make them. Esso Chemical Canada has the world mandate in polyvinyl chloride (PVC) — a petrochemical used in such products as floor tile, hoses and siding. In addition, Esso Resources in Calgary performs most of Exxon's worldwide research into heavy-oil recovery.

Since Imperial started research at Sarnia in 1924, almost 60 years ago,
The toast was successful, and the Fawley refinery got the Queen’s Award to Industry for the new process, which entitled Tony White and others on the team to a dark blue tie patterned in Rogo Crowns. He still wears it occasionally.

This pattern of round-the-world consulting was formalized in 1976 in the Specialized Technical Assistance Program (STAP). Under STAP, Imperial’s experts are away from home as much as three months of a year, breaking bottlenecks, improving productivity, exchanging good ideas, transferring Sarnia’s expertise to refineries around the world.

Such exchanges are “absolutely essential” to continued research, Dave Shaw says. “It’s a way of closing the loop between defining a problem in a refinery, finding the solution in the laboratory and implementing the solution back in the plant.”

Young Jim Eagan looks at his notes: September in Singapore, October in Tokyo, November in Hong Kong. … As the STAP adviser on distillation — the first step in the production of lubricating oils from crude oil — he travels almost three months of the year, analyzing the operations of each refinery in the hope of squeezing more and better-quality lubricating oil from each barrel of crude.

In Sarnia, Eagan collected samples of distillate for study in the Sarnia laboratory. Back home, the scientists pinpointed the source of the Singapore refinery’s problems: too much distillate was being lost, Eagan later wrote, through an incorrectly designed collecting tray. Adjustments cut the leakage and increased the plant’s yield by 600 barrels a day.

At Augusta, Sicily, solving a problem of heat removal rates in one of the distillation towers increased the yield by 1,800 barrels of light lubricating-oil distillate a day. “They were ecstatic,” he says. Since then the plant has gone further and now has a total increase of about 4,500 barrels a day.

Sharing technology is equally important at the plastics technology centre in Sarnia. Exxon Chemical has two polyvinyl-chloride plants, one in Sarnia and one in Thessaloniki, Greece. Brian Lockhart’s research group is responsible for evolving and improving on the technology used to build them. That involves exchanges of people, too or three meetings a year where “we roll up our sleeves and work on technical problems and their plants” and even help with product testing. Currently, simplex of vinyl siding events, new homes are baking under simulated Mediterranean sunshine in Sarnia’s artificial weathering chamber.

The result, Lockhart says, is that the Greek plant’s over-all capacity and efficiency have increased “by a very large extent; the improvement is a result of our close relationship.”

In the Exxon family, Esso Resources in Calgary is the principal centre of research into the recovery of heavy oil — oil that is so thick that it cannot be extracted by conventional methods. While that research is primarily directed to the company’s oil-sands deposits at Cold Lake, Alta, it can be used to increase energy supplies around the world. So it was natural that when an Exxon affiliate in Colombia needed help with its heavy-oil holdings in a hurry, it came to Canada. Perry Glaster of the research department and Don Harrison of the exploration department spent a week in Colombia in the fall of 1980. Harrison went back in early 1981 to help interpret the findings, and geologist Gerry Kendal is currently there with his wife for a one- to two-year assignment to supervise the exploration program.

Since the Canadians are confined to Bogota, drilling cores have to be brought back to the city for study — and brought back by airplane. Geologists need to know exactly how the layers of sand have been laid down. In western Canada in winter this is no problem: the cores freeze solid. In the jungles of Colombia, they flow together. The Canadian suggestion was to fly in a mail-order home freezer, to keep cores frozen while awaiting airlift back to the city.

Once heavy oil is found, getting it out of the ground is the next challenge. The current technique is to heat it, usually with steam, until it is fluid enough to be pumped. Esso researchers have what they think is a better way: warming the oil sands with steam, then introducing high-purity oxygen. It causes a high-temperature chemical reaction, involving about 10 percent of the buried oil, which liquefies the rest. It saves money in two ways. Rather than using hydrocarbon fuel on the surface, it uses fuel in the ground that would not be recoverable. And although air is free, oxygen in large quantities is cheaper to use because of the lower volume that has to be compressed and injected underground.

This technology works in the laboratory. But, says Vern Larson, Calgary research manager, “We need to find a place where we could practice this technology so that we could maintain our lead and find continuing work for our people.” The answer was in the state of Mississippi, where Exxon U.S.A. has deep heavy-oil deposits. Esso Resources people have been going back and forth for a year, “providing a consulting service” in preparing a proposal for a test in Mississippi of Canadian technology, which, if successful, will make more energy available.

Imperial geologists are also world experts on ancient ocean reef systems (“We have more and better data on them than anywhere else — period,” says Jack Wendt of exploration research), and an Australian affiliate has assembled teams to Calgary to tap that expertise. Most western Canadian oil production is from structures similar to the big coral reefs but laid down 350 million years ago in the Devonian Period. A recent commercial-sized Korokoro oil strike is in an area of similar age, and in geological terms, it is comparable. A better understanding of reef structure leads to better-educated guesses on just where the oil is.

Helping Esso Australia explore and exploit its reefs helps Canada, too, Frank Stoakes of exploration research says, “We’re just being one of the largest Canadian reef complexes at Norman Wells.”

Everything we learn from tests in Australia about reef structures will eventually help us extract oil more efficiently at Norman Wells.

Stanley Pocock in Calgary illustrates yet another way in which Canadian expertise benefits energy research around the world. He is a paleontologist, an expert in analyzing the pollen preserved in ancient sediments to learn what kind of vegetation was growing and thus predict how oil might be trapped. His two trips to India have helped researchers in both countries understand better what they find.
Unlikely as it seems now, Canada and India had a similar environment many millions of years ago.

On his last visit, he spent two weeks trekking through the Deccan mountains of southern India, taking samples from peat bogs by day, bunking in government house guests by night. "It's a sub tropical climate," he observes, "but I've never been so cold in my life."

Pojosky says his work "incidentally" helped India find some oil in an ancient mangrove swamp in the Cauna, delta. More importantly, he says, analysis of cores he took from a southern India swamp has helped scientists understand the way woody materials are broken down into oil, thus taking "some of the guesswork" out of drilling.

In addition to Imperial's research specialties, it's people often find themselves salarymen in other assignments. Weekend Zajawi, manager of the production research division at Calgary, for instance, was called to Egypt late last year to advise the Egyptian General Petroleum Company on selecting a research organization more effective. Egypt produces about 600,000 barrels a day, but production is falling and will be about 400,000 barrels by the end of the year. The country's and Cal's engineers would have nothing to do.

Better that required research facilities would not only sit idle in one country, but at least be used by foreign operators, thus increasing the nation's dollar out of drilling.

Zajawi spent a week learning first what the Egyptians wanted and second whether the technology they already had. Back home in Calgary, he boiled down his recommendations into two pages. "He almost accomplished what they could expect with what they had and what they would have to do in order to achieve more," his report included sample floor plans for laboratories and lists of equipment he felt was necessary.

The experience was fascinating personally, he says, for relatives of an Egyptian colleague in Calgary took him places most tourists never have a chance to see. It was also rewarding professionally. "It's nice to feel you're going to be appreciated."

Bill Stover of Sarnia has a less professional assignment. His extra-curricular task is to find more exciting assignments to Iran, which was cut short by the revolution in 1978. Stover, an expert in lubricating oils, was part of a three-person Exxon team invited by the National Iranian Oil Company to provide research assistance. His assignment was to find out, through laboratory and field tests of car engines, how frequently Iranian drivers needed to change their oil.

Iranian driving was more terrifying to Stover than the revolutionary riots, but although "a car without a dent must have been made yesterday, they took great care of their engines. Most Iranians changed the oil every 1,000 kilometres — as soon as it looked dirty — while with similar quality oil we would let it run at least 8,000 kilometres." As a result, the country was running short on lubricating oils and wanted to convince drivers they could safely use less.

Stover barely got started on the assignment when the riots began. Traffic in Tehran was always horrendous. Even on a good day the last 24 kilometres of the daily drive to the refinery took an hour and a half in the morning and two to four hours at night. As rioting increased, the drive became a harrowing obstacle course, as the same team's car was sectioned by flaming barricades. In December 1978 Exxon told them to get out. Stover flew to Switzerland for a holiday with relatives, expecting to return in a few weeks. "We left everything — even a decorated Christmas tree," Stover says. By Christmas, he learned he could never go back.

Moving technology by exchanging people works both ways, and so overseas researchers can have a hard time getting back. Tiedje expects to find possible oil sources when he goes back to his job with the Indian government's oil company. The man who now manages Esso France's research laboratory spent two years at the Sarnia laboratory and management development program. Nicolas Beltran, a Colombian who is exploration manager for Esso in the Caribbean, is a member of an affiliate in that country, had a couple of years of exploration training in Calgary and Edmonton.

Visitors from the English and French laboratories are currently at work in Sarnia, discovering how the quality of crude stocks affects the performance of finished lubricating oil. Such studies are increasingly important as refineries find their supplies of the traditional, lubricating-oil crude are declining.

Chris Clarke of Abingdon, England, was able to say in the middle of one of Ontario's coldest winters that he and his wife were enjoying the variety of climate. "English weather is pretty much of a muchness," he offered. As for Pierre Domingue Marlin from Rouen, he reported that his three-year-old son was the linguist in the family and after less than a few months in Canada was singing "Jingle Bells" in English.

The influence of Imperial's Canadian research ripples even further through publications and teaching. Sarnia laboratory people are proud of having presented a paper at every World Petroleum Congress since 1933. Sarnia and Calgary experts teach regularly both in company programs and outside. Jim English, for instance, is distributing a presentation every year for new engineers from affiliations around the world. "In the last deposit crowd in heavy-oil research in Calgary, helps teach a course on thermal recovery (usually with a lot of heavy-oil) to Exxon people from around the world, at Houston. He also gives a graduate-level university course in Calgary and with others from Esso Resources, teaches in an industry-sponsored course on petroleum (finding new ways to extract oil)." The research department believes that leadership includes a desire to spread the knowledge, he says.

Why the intense research activity? "The oil industry realizes it's going to have to make better and better products from poorer and poorer feedstocks," says Tiedje, "and the situation is going to get worse, not better." On the product side markets are changing, and so the mix of products that comes from a barrel must change.

Research must provide the technology to meet these continuing needs. "At the same time," Tiedje points out, "you can't be afraid of the challenge of longer-term research that will create new opportunities, useful and profitable — and for the world as a whole!"
shoes, the Calgary artist produced highly romanticized images of Cree
haidal pastries. Blackfoot encamp-
ments and Metis hunting parties.

Thirty years after Kane's first trip
to the West, Ramon construction

The goal of the project was to build a
to the field. The results are often amusing. A
painting depicts an 1860s ranch hand
wielding a 1980s shotgun, sculptures show horses standing in an impossibly
contorted positions, and a wood car-
ingen has a saddle on backwards and a
cowboy mounting from the wrong

"If paintings of sailing ships were
in vogue, these guys would be paint-
ing sailing ships," says Malcolm
MacKenzie. "Serious collectors just
laugh when they're offered work like
that, but it is being sold to buyers
new to the market. The sad thing is,
some of this rubbish will still be around
100 years from now, passing itself off
as the genuine product."

The most popular form of creative
expression for MacKenzie and other
modern-day western artists is bronze
sculpture, roughly between 15 and
13 centimetres in size. Bronze because
of its durability, sculpture because it
provides a dramatic impact many
believing to be lacking in two-dimensional
paintings.

The Canton, N.Y., native widely
considered to be the greatest of all the
cowboy artists, Fredric Remington,
used both canvas and bronze stat-
ues. His realistic portraits of frontier
life west of the Mississippi in the 1880s
are renowned for their lavish devotion
to detail. (Remington creations fetch
the steepest prices in today's marketplace, a private collector recently
bought a painting in Calgary for $200,000.)

Remington glorified the U.S. Cava-
lary, frequently at the expense of the
Indians the soldiers were fighting.
When Paul Kane visited the Canadian West 30 years earlier, he had viewed
the natives in a different light. Travel-
ing by canoe, packtrain and on snow-

Alberta convinced that he should not only be doing sculptures but should teach himself how to cast them.

He started carving his way two years later and eventually built his own furnace in a large shed on his 140-horse ranch. Now 49, he sold his outfitting business last year to become a full-time artist. A perfectionist, he completes only about three new bronzes a year and has been known to tool two years on a single piece. As each sculpture is usually reproduced 15 times, those three originals supply enough material for the Cochrane gallery run by his wife, Judy, and her mother, as well as for galleries in Calgary, British Columbia, Texas, Arizona and Montana.

"Some people think I've found a pretty easy way to make money," he says. "All I have to do is turn off a bunch of copies as though the furnace were a Xerox machine. I wish it were. Casting is an exhausting chore that can have you going 18 hours a day. I spend 80 percent of my time losing molds, and more often than not I have to go home and get a good night's sleep before I can remember, I've had pieces shatter or crack after I've been up all night keeping the fire at the required temperature."

MacKenzie feels that cowboy art is an indigenous North American art form and therefore it has the potential to be as widely accepted in Canada as Inuit art. To put it mildly, he sees little value in the abstract creations given priority treatment by many Bay galleries and museums. "I took a trip to New York a while back and went to some exhibitions. How can they call that stuff art? You can't tell if some of it's hung upside down or sideways."

Harry O'Hanlon shares MacKenzie's views on abstract art. A 66-year-old sculptor who lives on a ranch just outside of Calgary, O'Hanlon says the public has been persuaded to embrace nonrealistic works by the kind of critics who are still resolutely anchored to the stubborn belief that cowboys are a "craft" and not a "fina life art." O'Hanlon doesn't think he missed much by not going to art school either. "You develop your own style when you teach yourself. Art school graduates tend to paint or sculpt the same way their instructors do."

O'Hanlon has been sculpting for only five years. While most western artists focus on chuckwagons, branding sessions and other aspects of the ranch hand's daily existence, he has set out on his own unique path, concentrating on the Piegans, Blood and Blackfoot tribes of the Blackfoot nation. He has completed 33 bronzes to date, depicting religious ceremonies, tribal wars, camp routines and hunting customs in frontier times. He particularly researches every subject, right down to the hairstyles and moccasin stitchings, before beginning one of the five pieces he produces every year.

His penchant for authenticity has been amply rewarded. The Nickel Museum at the University of Calgary, the Glenbow Museum and numerous private companies have purchased his work, and a bronze statue was presented to Prince Charles when he visited a Blackfoot reserve in 1977. Since he started working in bronze, O'Hanlon has sold $100,000 worth of sculpture.

"I've always been fascinated by Indian culture," he says. "In grade school, I used to make native villages out of paper and carve native figures out of wood. Don't ask me why, but I was an Indian in my last incarnation."

Born in Edmonton, O'Hanlon traveled to Vancouver at the age of 22 to have a 15-metre yard with his brothers. The three men intended to sail around the world. A hurricane wrecked the ship off the California coast, and they barely escaped alive. They then took a freighter to the Panama Canal, where O'Hanlon worked for two years. Coming back to Canada in 1939, he joined the Royal Canadian Armored Corps. He married a Newfoundland-born bacteriologist, Betty Gifford, and after the war the couple spent four months on a tiny, uninhabited island 370 kilometres east of Costa Rica, searching for a $60-million buried treasure.

In 1952 O'Hanlon moved to Montreal, forming an independent company, went wildcatting in the Cat Rank region. Leasing ranch land on a Blackfoot reservation, he began doing oil paintings of tribal elders (a 101-year-old chief among them) on deer-skin stretched between birch frames. When he wasn't drilling for oil or painting, he competed in rodeo. Altogether, he did 50 portraits in a seven-year period. After discovering the abundant Moulton Pool oil patch in 1963, he returned to Alberta and settled on a ranch near High River.

"I think it's rather sad that Canadians know so little about the native people's ancient tribal customs," says O'Hanlon. "That's why I want to go on doing this work as long as I can. I'm awfully glad there's a demand for my bronzes, but I'd go on doing them even if there wasn't."

Although there has been a steady market for cowboys since its early days, the current boom has spawned a situation where many artists, O'Hanlon included, have orders for pieces before they carve them. Angela Bugera of Edmonton's Beaudry Gallery says the Canadian works usually sell faster than the American items she handles because the quality is generally higher. The themes have stayed fairly constant over the decades but, she says, there are subtle differences in cattle scenes and more native sculptures from the 1880s and those of today.

Whatever the reason for the upward surge, Nadine Flootat of Calgary's Gainborough Galleries forecasts that the day will soon arrive when8urers will literally strip galleries bare at exhibition openings. "We had a Richard Freeman show recently, and 50 of his 35 paintings sold immediately. As for MacKenzie or O'Hanlon, we can't get enough of their work," a Parisian who migrated to Alberta five years ago, Flootat says she didn't know what to think of cowboy art when she first set eyes on it. Now, she's an avid supporter. "These artists are creating images of things they understand and love," she says. "That is the kind of feeling that has sparked international art movements, and I wouldn't be at all surprised if cowboy art makes quite an impact all over North America in the next few years."
In Closing

Our day toward the end of May, I decided to keep a promise I made to myself a long time ago: to take the train, not because I wanted to go anywhere in particular, but because I wanted to enjoy an all-day journey on the train.

Since I was pressed for time and uncertain of the best route for a single-day trip, I put through a call to a man in Montreal who has helped me in the past and who probably knows more about trains and train travel than anyone in Canada, Omer Lavallée, corporate archivist of Canadian Pacific Limited and railroad scholar extraordinaire.

"The trip for you," he said, "is the Adirondack, leaving Montreal at 10:15 in the morning, arriving in New York at 7:15 in the evening. You'll ride through an interesting part of Canadian history in the morning, look out on upper New York state in the afternoon, and arrive in Manhattan with the sun still in the sky. A good day's journey. Why not come to Montreal the night before, in time for dinner? We can talk about the trip, and you can see the city in the morning."

We met at one of his favorite restaurants, Mother Martin's, a roomy and friendly place only a few minutes from Windsor Station, the famous building from which the trains to New York have been running almost continuously since 1855 and which is headquarters for Canadian Pacific Limited. Omer Lavallée went to work there in 1912, when he was only 17. He has been there for 40 years, a steady, outgoing man now in his middle fifties, whose interest in railroading is so complete that it has come not only his work but his hobbies, not just a frivolous pastime but a serious pursuit of his history. Soon, he will bring out his fourth book, Canadian Pacific Steam Locomotives, a work that has taken a lifetime to research and which should earn him the lasting appreciation of all railroad buffs, since it will contain descriptions of no fewer than 3,250 steam locomotives.

He had thoughtfully prepared an aide-mémoire — maps, timetables, a few paragraphs on many of the towns, villages and empty stretches I'd pass through the next day. "One spot to look for," he said, "is Lacolle, eight kilometres this side of the border. Take notice of the station, one of the most elaborate rural stations in Canada; it's designed along the lines of a French chateau." Later, when we'd finished dinner and were having coffee, Mr. Lavallée was raising his cup when, as if he had had a sudden thought, he didn't want to let pass, he said: "Let the conductor know you're interested in the trains. If you're not too busy, he'll give you some time. These men know trains; many have worked a lifetime in them."

Yes, the trains have worked a lifetime in them. The Adirondack, leaving Montreal at 10:15 in the morning, the train is ready to roll."

He said: "Well, Mr. Lavallée, I'm off to New York, where I'll be waiting for you at the train station."

"I'll be there," he said, "with the train."