

AN UNSUNG HERO — THE CHARTMAKER

A History of Nautical Surveying in Canada

By Stanley Fillmore and R. W. Sandilands

N. C. Press Ltd., \$34.95. Illustrated, Indexed, 255 pages

(From the *Toronto Sunday Star*, February 12, 1984)

"It is better to have absolutely no idea where one is, and know it, than to believe confidently that one is where one is not."

— Cesar-François Cassini de Thury
18th-century French
surveyor and topographer

By Nicolaas van Rijn *Toronto Star*

PASSING THROUGH unknown terrain, any traveller is bound to keep a record of his movements and a note about the terrain; if not for his own return journey, then for those who are bound to follow. But:

"Consider, for a moment, a section of the Rockies and the Alberta foothills," the authors write. "Imagine a passenger

THE RANKIN DIARIES

June 21, 1897. Awoke to find Ogilvie standing on my chest, cursing my very existence. Apparently he'd found out about the "Stake-stretchers" I've been selling on the side. I've been making good money pushing these rubber links, but the fact that they enable a Gunter's chain to be stretched to over 270 feet has Ogilvie on the edge of apoplexy. He says he'll fix me.

June 29, 1897. Dick Lowe's replacement arrived today - Johnny "Cut-throat" Jackson, an axeman just in from Seattle where he's wanted for murdering his room-mate who apparently snored. Ogilvie's suggestion that "Cut-throat" room with me, reduced me to a snivelling wad of useless protoplasm. "What the heck, Bill," I said in a robust voice, "let Johnny have the whole room, I'll sleep with the dogs." Ogilvie's comment that this might corrupt the dogs left "Cut-throat" in stitches. I laughed good-naturedly, all the time plotting my escape to Mongolia. To improve my thinking, I went down to Kitty's where I re-pondered my pitiful life over a bottle of Perry Davis Painkiller before retiring to a night of capitulation.

His last apparently, for this is the final entry in the Rankin diaries. I can only conclude that either Rankin made good his escape to Mongolia, or else he snored.

aboard a sophisticated flying carpet that floats some few thousand feet above ground at, say, Calgary. It is his task while aboard the carpet to make the observations necessary to produce a contour map of the region over which he is to fly.

"Oh yes, the carpet passenger has one major problem to contend with - clouds quite impenetrable to the naked eye obscure the ground beneath him. Now, how - precisely - does he go about producing his map of the Rockies from Calgary west to the coast?"

That, in a nutshell, is the problem that has faced navigators since time immemorial.

To go anywhere, be it from home to the office or halfway around the world, three facts must be known:

- The location of the starting point,
- The location of the destination, and
- An idea, if not the knowledge, of how to go about getting there.

The Chartmakers was published to celebrate the centenary of the Canadian Hydrographic Service (CHS), founded in 1883 when a struggling young Dominion, strapped for cash, began conducting its own hydrographic surveys of Georgian Bay, then the hub of Canadian shipping. It is a compelling guided tour of history, in particular the paths men charted to make that history possible.

Reading it is similar to an overland journey - one oasis after another of fascinating detail from our past and the men who helped make possible the future in which we live - interspersed with dry, dusty technological passages.

Still, for what it is - a government publication celebrating the achievements of a government service - Fillmore and Sandilands have succeeded in making an interesting job of tracing the history of cartography. The work ranges from the studies of the stargazing Babylonians 5,000 years ago to today's systems of determining precise positions from navigational satellites.

The book is profusely illustrated with photos of the modern ships and methods used by the CHS today.

While determinedly Canadian in focus, the authors do not stint on the history of the craft of navigation and cartography, conducting a global tour of the developments that turned the craft into a science.

Flat earth? That was debunked as early as the 4th century B.C., when Aristotle wrote in his *Meteorology* "The sphericity of the earth is provided by the evidence of our own senses." By the 2nd century A.D. men had an atlas of the world and the principles of astronomy, navigation and cartography to set off on explorations. Why, then, wait until the 15th century before venturing out to discover two continents and an ocean?

Objecting to science, Christian zealots destroyed scientific knowledge and killed those who could make use of it, halting progress for centuries.

But the Christian Crusades made up for the lapse, for it was only then that commerce with the Arabs introduced the magnetic compass and the astrolabe to the West.

And, of course, in 1415, Portugal's Prince Henry The Navigator set up his seaside training centre for navigators, sailing masters and sailors. During the next 300 years the Atlantic became a pond - a rough one, to be sure, but a pond.

And then came the time to chart its limits, to do the kind of work that might be done from that flying carpet hovering over Calgary today.

For example: Without Captain James Cook, perhaps the most famous navigator of modern times, Canada might well have remained a French colony. In 1759, aboard HMS *Pembroke*, Cook led several other sailing masters in an exacting survey of the Traverse, a treacherous water hazard in the St. Lawrence River below Quebec City. Only then were the ships carrying Wolfe's soldiers able to negotiate the river.

Today, Canada is one of the most charted nations on earth, but with our vast seacoast, the gaps remain enormous. At the end of 1982, only 15 percent of Arctic waters were surveyed, and 25 percent of Canada's inland navigational waters and our 151,488,000 mile coastline - the largest on earth - remains unsurveyed or surveyed to a minimum "reconnaissance" level.

With less than half of Canada's shipping lanes properly surveyed and charted - as always, scarcity of funds and manpower is the problem - the CHS has its work cut out for it in the next 100 years. ●