

ENJOYING A LIFE IN SCIENCE. By P.F. SCHOLANDER. Fairbanks: University of Alaska Press, 1990. 226 p., maps, photos, refs. Hardbound. U.S.\$22.95.

Pete Scholander's autobiography is really an account of his enjoyment of life. Science was a means to this end. That his science was brilliant, stimulating, challenging, if at times controversial, made for him a rich and rewarding life of accomplishment. Here is a chance to share in his exuberance and enthusiasm. It is impossible to review each and every scientific endeavor, nor is it necessary or appropriate, since we are not dealing with a scientific manuscript. We are dealing with a way of life. Each account of his scientific and non-scientific "adventures" is simple, brief, and largely understandable to the layman. Each is also accompanied by his unending enthusiasm and enjoyment of life, congenial company and colleagues, good food, good drink, and good music. He continuously relates to people and his many friends throughout the world.

His first and continuing love was the Arctic, first in Norway and later in Alaska. But better to understand the Arctic one needs also to know the Tropics. Indeed, the world was his laboratory. And no topic was immune from his scrutiny. His early years in Norway and his early arctic ventures are of rather great historical interest. His youth was no doubt influenced by many of the leading European scientists of our time, such as Ahlmann, Bjerknes, Krogh, Mosby, and Ruud. I only wish he had devoted more attention and detail to the fascinating start of his career.

It is quite likely that his early training in medicine provided the best possible broad scientific background for his later endeavors in physiology. I suppose medicine in itself seemed too constrained for his temperament, although some of his later work returned significant contributions to medical science in application of the methods he had developed. What seemed principally to thwart a normal career in medicine was his insatiable and unlimited curiosity about almost everything. His unique ability was to identify simple but meaningful scientific problems, such as the rise of sap in trees or grape vines, the growth of mangroves in a salt water habitat, cold acclimation of the natives of Terra del Fuego and the Australian bush, diving seals, Australian pearl divers, supercooled fish, and the composition of gas bubbles in ice.

His involvement in the gas bubble studies in Labrador, Norway, and Greenland shows much about his way of science. In 1954 a small laboratory was established in Hebron Fjord, Labrador, to study the physiology of bottom fish living in a permanent high arctic environment of -1.7 to -1.8°C found in the fjord basin, while the body fluids of these fish remained almost 1°C warmer! Instead of complex and perhaps unreliable power machinery at the remote site, he used the simple expedient of ice and salt to control temperatures for the experimental work. Among the sources of ice were icebergs, presumably from Greenland. Icebergs contain gas bubbles under pressure. Immediately there was a mercurial rise in Pete's curiosity. Could these bubbles be ancient atmosphere trapped when the snow settled on the Greenland ice cap millennia ago? Immediately available from the Hebron Fjord work was the technology of the physiologist for micro-analysis of respiratory gases. And promptly aboard the R/V *Blue Dolphin*, analyses of the bubble composition were made. This led to further development of techniques in Norway and the 1958 Greenland iceberg dating project, described in chapters 14 and 19.

A principal feature of Pete's work that sets him apart from traditional field scientists was his undertaking detailed experimental work on site in the field, whether in the Arctic or the Tropics, rather than the traditional way of collecting specimens and data to be contemplated perhaps months later on return to the home institution. After his early ventures to Spitzbergen and Greenland this was his normal way of science.

A second feature that soon emerged was his "team approach." His ability to attract competent and diverse colleagues would produce much broader and more significant results. And he needed the stimulation of these colleagues working on related, or unrelated, projects

who could challenge and debate him. But at all times he seemed to be the center — which he was! Few of his friends will dispute that he was somewhat self-centered, egotistical, and opinionated; but he was always honest and generous. Early on he set forth his strong views, not universally popular, on religion, succinctly but not offensively. This simple and direct honesty is found throughout his autobiography, which is quite refreshing in today's world of "weasel-wording" and cautious indecision.

His imagination was unrestrained. For example, just after World War II he proposed to mount a laboratory in an old military troop glider to be landed on remote Prince Patrick Island in the high Canadian Arctic. This became moot when the U.S. Office of Naval Research established the Arctic Research Laboratory at Point Barrow, Alaska, where an era of on-site arctic field research was set in motion principally by its initial investigators, Larry Irving and Pete Scholander.

One of Pete Scholander's important accomplishments was the creating of the R/V *Alpha Helix*, which fulfilled his fundamental objective of having a first-rate laboratory ship to conduct experimental work, whether in the Arctic, the Tropics, or even up the Amazon. The idea was there from the outset; but the nurturing of it and the selling of it to the funding bureaucracies was largely through Pete's initiative and persistence. The *Alpha Helix* remains as an investigative tool for future researchers who follow in Pete's steps.

But sometimes it was pure fun. When at Elgin Field in early World War II, in an attempt to outwit the minuscule brain of an alligator, Pete and Larry Irving managed to capture one and brought it into the laboratory one evening. The next morning, after it had frightened the lab attendant, they took it back to its creek and let it go. Why? "Just for the hell of it."

There is one rather great gap in Pete Scholander's chronicle that I must note. This is failure to acknowledge adequately the role in his life and in his science of his marvelous and charming wife, Susan Irving Scholander. Susan stood by him at all times, from providing a congenial home and entertaining Pete's almost continuous stream of guests to active participation in the field projects. Any account of his life is incomplete without recognition of Susan. I am certain all Pete's friends and colleagues will join me in affirming this judgement.

In conclusion there are two special enduring notes that deserve mention. In 1979 he was awarded the Nansen Prize from his boyhood Norway and distinguished recognition from the old world. In 1989 the Physiological Research Laboratory at Scripps Institute of Oceanography was named Scholander Hall as a new world recognition.

I feel honored and privileged to have had an opportunity to share a small part of Pete Scholander's exciting and enjoyable life in science.

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THE INUPIAT AND ARCTIC ALASKA: AN ETHNOGRAPHY OF DEVELOPMENT. By NORMAN A. CHANCE. Ft. Worth, Texas: Holt, Rinehart and Winston, 1990. 241 p., maps, photos, figs., bib., glossary, index. Softbound. Price not indicated.

Norman Chance is well known to students of the Arctic because of his first book on the Inupiat, *The Eskimo of North Alaska* (1966). But his research interests in cultural anthropology took him to other regions. He has conducted studies in northern Canada, the American Southwest, and China. This range of experience in comparative development problems gives Chance's second book on the Alaska Inupiat a broader perspective. Not only does he review changes since his first trip to Kaktovik in 1958 and examine the transformation of the Inupiat hunting and gathering culture under the pressure