

THOMAS SAUNDERS ENGLISH
1928-1985



After three years of illness, Tom English passed away in Seattle, Washington, on 5 January 1985. His students and colleagues mourn a decent, unselfish friend who showed great courage in facing his fate.

Tom was born and grew up in Washington, D.C. The undergraduate years, 1946 to 1950, were spent at Iowa State University in Ames, first as a journalism major, later as a zoology student. He continued at Ames with graduate work in zoology and statistics, receiving a master's degree in 1951 with a thesis on age, growth, and life history of carps in a local lake. In the fall of that year, he enrolled in the then School of Fisheries of the University of Washington. Before receiving his doctorate at the University of Washington in 1961, Tom did graduate

studies at the University of Oslo and in Bergen, Norway (1954-55); he also served in the U.S. Air Force at Fairbanks and near the North Pole (1956-58) and spent one year as instructor in fisheries biology at the University of Alaska (1958-59). His Ph.D. thesis treated the distribution and abundance of planktonic flatfish eggs in Puget Sound.

Tom joined the teaching faculty of the then Department of Oceanography of the University of Washington in 1959. The next quarter of a century of his professional life was more than filled with teaching, research, participation in base-line studies for the state and federal governments and administrative work in the department. He maintained his early ties with the University in Bergen and was involved in the development of a co-

operative program between the universities of Washington and Bergen. In addition, many municipal, state, and federal agencies, as well as private industries made use of his vast interest and knowledge in many scientific areas. The emphasis of Tom's teaching was on contributions to the university's liberal arts program (where he earned acclaim and awards for excellence in teaching by students who often disliked science) and on guiding graduates in thesis research. He was the mentor of 18 students toward their master's degree, of whom 10 continued on toward the Ph.D. in Seattle and elsewhere, and of 5 students toward their doctorates. Also, the department grew during this period from a small academic unit to a major oceanographic institution: Tom deserves much credit for helping to shape its growth especially while serving as the Assistant Chairman for Instruction (1968-74). Here, he was imaginative but at the same time worked hard at the details and, as in his teaching, proved again and again his genuine concern for students and colleagues alike. This is what comes to my mind first, when thinking of him: his interest and compassion for people while all along being interesting himself because of his broad outlook, which included the many affairs of the city and the nation, and his appreciation of the funny or bizarre aspects of life.

Tom's research interests revolved around problems of sampling design and the plankton of the Arctic Ocean. Regarding the former, I may mention that a key paper (English, 1964) evolving from his Ph.D. thesis is far too rarely read. The common method of estimating stock size of fishes with pelagic eggs from integrating areas within contour lines of egg abundance was critically assessed and a better method was proposed.

Tom's arctic research seems to have developed from extraneous origins: After returning from Norway, the Korean war was still lingering, so Tom chose to discharge his ROTC obligations of undergraduate days by entering the Air Force (where he rose to the rank of captain) and, apparently, elected to be detailed to the Arctic Aeromedical Laboratory outside Fairbanks. Being at first responsible for the scientific oversight of arctic contract work, as their only marine biologist, and perhaps attracted by the glamour of working far north where few men had been before, he spent two summers and autumns on Drift Station Alpha, an ice floe near the North Pole and occupied during the International Geophysical Year (1957-58). The biological investigations were performed under contract with the Arctic Institute of North America. Besides being among the first to SCUBA-dive under the ice (the glamorous part — although pictures looked like people swimming in a cocktail glass, as he put it), Tom established in great detail what earlier polar investigators could only suggest: that the annual phytoplankton cycle under the ice is primarily driven by underwater light, which in turn depends more on snow melt than incident radiation. The results were presented in 1959 as an invited lecture at the First International Congress of Oceanography in New York (English, 1961a; abbreviated version in English, 1961b).

In the mid-sixties, Tom's continuing interest in the plankton of the Arctic Ocean was directed to Fletcher's Ice Island (also called T-3). Plankton collections were made in eight summer

seasons between 1966 and 1973, and in all or most other months from 1968 through April 1974. The island drifted during this time from about 75°N north of Point Barrow, to beyond 85°N, to north of Ellesmere Island. In addition, summer collections were made in 1975 at the main camp of the Arctic Ice Dynamics Joint Experiment in the Beaufort Sea.

Predominantly north of 80°N, Tom, his students, and his assistants collected the following (approximate numbers): 5500 samples each for temperature and salinity, 5000 for oxygen, 3300 each for phosphate, nitrate, and silicate, 6000 for chlorophyll, and 4000 measurements of photosynthesis (¹⁴C); further, 5800 phytoplankton and 11 000 zooplankton samples were gathered, the latter largely by net hauls but some also by pump and hose. While the emphasis was on the upper layers, some sampling extended to the bottom. The enormous, truly unique body of analyses has only partly been evaluated, principally through Tom's students' research leading to M.S. or Ph.D.s (Hughes, 1968; Scott, 1969; Anderson, 1972; Pautzke, 1979). We endeavor presently to deposit the observations in the National Oceanographic Data Center.

It has appeared to me for many years that Tom chose not to spend much of his energy on the dissemination of research results through publications but, like a real college teacher, to devote his time primarily to transmitting knowledge by classroom teaching, as well as guiding students doing research. As W.H. Percy, a friend and colleague since the days of Iowa State, wrote about Tom in another context, thereby contrasting his ways with the common mode in a science department at a major university: "I believe that the value of a scholar to a university derives largely from the quality of the students he produces, from the stimulation in written and spoken word provided to his colleagues, and from willingness to cooperate and share responsibilities for the betterment of the university and science." Thomas Saunders English has certainly contributed more than is wont.

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