

Ted Miller - A Full Life



This brief biography of Ted Miller's 98-year life is not intended to fully portray him or his scientific explorations. It was written by Jennifer E. Miller, one of his children, with input from others in the family; it presents aspects of Ted that are relevant to visitors to Earth-Wise Farm.

July 2013

Cover photo by Tony Wright:

Ted and his beloved dog Theo in Newfoundland

Back photo by Deede Miller:

Ted with Theo in Bogue Sound

For a copy of this book or to learn more, contact the Wildegeest Foundation at wildegeestfoundation.org or write 5706 Old Stony Way, Durham, NC 27705.

Theodore Milton Miller

1913 - 2012

Introduction

Ted Miller was an unusual person. Highly creative, he was also a trained analytical chemist. He was a sailor in weather fair or foul. He was 35 before he settled into his role as hard-working family provider. During their 40 years of marriage, Ted and Sylvia built a family compound of two homes and two laboratory buildings and adjacent farmland. He worked under contract primarily with the menhaden fisheries and named his private laboratory Marine Chemurgics. He developed seafood processing techniques that benefited federal agencies, trade associations, universities, industries and small fish houses. He devised ways to preserve the freshness of the catch, including fish oils, which impressed pioneering heart disease researchers who began collaborating with him. He was an inventor, and he was curious. He was happiest on the water. With his family, he enjoyed Bogue Sound's bounty.

When his wife died in 1990, he was 76 years old. He had not retired. But he had to get away from the grief and find a new life. He began traveling and camping, moving across North America seeking uncharted places and experiences, and new friends. He began to chronicle his journey, titling it *Wildegeist, A Search for Last Places*. "Wildegeist" was coined by his daughter Cindy as a take-off on "wild geese," that is, "unleashed" and in tune with nature. Ted realized that he needed work to keep his mind active and purposeful. His search eventually brought him back to the family compound on Bogue Sound, and he built Earth-Wise Farm in the adjacent fields starting in 2000 and the steel barn building that would become his last home.

Earth-Wise Farm was a pesticide/herbicide-free experiment, a place to practice what he had been preaching. Ted's farm plan built on his understanding of nutrition and health, and his interest in fish oils, whole grains, live seeds and readily available local foods that were loaded with antioxidants. Added to this was his fervent belief that older people could contribute to life around them if they remained physically, mentally and socially engaged.

As small farms disappeared elsewhere, Ted enriched the tired soil on his three acres of fields and gardens (including indoor planters), and modeled Earth-Wise Farm after WWI and WWII Victory Gardens. He experimented with a variety of fruits, vegetables and grains, and processed them in unique ways. He donated fresh produce to local charities. He ran clinical trials using acquaintances and friends, offering them fish oil and blood-test kits in return for diligent dietary changes. Those who worked with him or benefited from his largesse had their ears filled with his thoughts about proper cooking techniques, how to shop for affordable good foods, and the need for omega-3 fatty acids from reliable sources. At Earth-Wise Farm, Ted embraced a “synergistic” blending of healthy living factors, which he documented in many email “bulletins” to followers and in his two books. Blending his scientific background with an irrepressible creativity, he painted and collaged his thoughts, and wrote a number of unique treatises.

When he died on July 18, 2012, he left behind numerous friends and followers, reports and books, artwork, a going business promoting healthy fish oil, and Earth-Wise Farm. Now Earth-Wise Farm belongs to the North Carolina Coastal Federation, with a reading area featuring some of Ted’s creative and scientific work.

Early Life, Education, Adventure and Work

Ted’s father, Louis W. Miller, was born in 1883 in Lithuania, under Russian occupation. His family owned a flour mill, possibly in the town of Janiskis (pronounced “Yanishok” in Hebrew). He was from tough stock. He told stories of one uncle at age 86 dying after he was thrown from a galloping horse. The young men faced conscription into the Russian army and periodic anti-Semitic violence. Like tens of thousands of other Jews, Louis left Lithuania, concealed under hay in the back of a wagon, and made his way to Warsaw. At age 17, he boarded a ship to Ellis Island. By about 1910, he worked for New York wholesalers in clothing.

Through his work, he met Cecilia Berkwit. Her family had emigrated from Russia a generation earlier. Cecilia was born in 1891, on the Lower East Side of Manhattan. Her father, Samuel, ran a clothing store, first on Houston Street and later on 10th Avenue in the Hell’s Kitchen area. But Samuel died of “galloping consumption” in 1908. By the time of the 1910 Census, Cecilia

was 19, living with her widowed mother Bertha, two younger brothers and Bertha's 72-year-old father (Michael Granat, who died in 1911) in a mill town, Bridgeport, Connecticut.

According to an unpublished memoir of those years by her brother, Joseph C. Berkwit, Cecilia played piano by ear and was a trained classical musician. She had a beautiful contralto voice. Throughout her childhood, her mother had insisted on piano lessons for her talented daughter. As a teenager, she was offered a job in the theater, singing for \$75 per week with George M. Cohan's Broadway company, but her uncle (the elder male after her father had died) refused to let her go on the stage. Even as she worked for very little in a Bridgeport laundry during the day, she played piano in the Nickelodeon theater at night, with her mother chaperoning each show. Louis Miller, who had met her when her family had the store in New York, came courting when his work brought him to Connecticut.

Louis and Cecilia married and traveled west, and had their first son Sydney in St. Joe, Missouri in 1912. Ted was born in Taylor, Texas on November 3, 1913. By that time, Louis worked for Swift & Co. as a traveling salesman and then a manager. Ted's Texas memories included "a bungalow on the outskirts of Houston, crawfish, anti-Semitism and troops returning from World War I," according to an unfinished manuscript that he wrote in 2004, titled "Three Centuries." He told of an excursion to Galveston in a Model-T Ford which his father drove straight out onto the beach. As a result the car rusted, a lesson Ted never forgot.

In Texas, with two small sons and a traveling husband, Cecilia yearned for higher culture, and so in 1919 the family boarded a steamship from New Orleans to New York City. Ted remembered:

...the stormy return voyage during the winter of 1919...made a lasting impression on me, the start of my longing to log as many miles as possible under my keel, wheel, or wing. Even at that tender age I loved the pounding of the sea, and the motion of the ship in its slow roll to port, then starboard, and its shuddering lurch. I discovered a taste for olives when the kindly steward dispensed them as medicine to my frightened, seasick parents, in their cramped cabin.

At age six, he saw the Statue of Liberty and the "tallest building in the

world,” the Woolworth building. The family first stayed in Brooklyn with Louis’ younger brother Nathan Miller who was just starting his work as a medical doctor. Ted remembered attending second grade in Bridgeport, Connecticut, where his family had moved to stay with Cecilia’s mother and Cecilia’s younger brother, Eliot, in about 1920.

Ted wrote that “time dragged” until the family moved to Baltimore where “Dad found a job [driving] a small panel truck, delivering soda pop.” They first lived near the harbor in an apartment on Whittier Avenue, an enclave for Jewish emigrants from Russia and Eastern Europe. Ted said in later remembrances that though he was a child, he was aware that Baltimore was made up of separate ethnic neighborhoods. The city bustled with horse-drawn carriages, street cars, hard-working people trying to get ahead, ship traffic at the port. He wrote of his delight in the “tiny stores [which] catered to the younger kids” with candy, pickles and “Coddies”: “...a tiny codfish cake with mustard between two crackers, for just a few pennies.” Ninety years later Ted would muse that “with these Coddies, a bit of Newfoundland was thereby introduced into my veins.”

Though his family was not Orthodox, they lived in Jewish neighborhoods, thus avoiding some of the prevalent anti-Semitism. They prospered and sought a house in the suburbs for the fresher air and trees, and moved to Carlisle Avenue in the Windsor Hills section which had recently seen an influx of Jewish families. After moving every year and staying in apartments with “bedbugs and roaches,” they were glad to have “a place of our own.” Ted remembered his mother finding “Sheraton” mahogany furniture and fragile porcelain vases at an estate sale. Windsor Hills and the larger area called Forest Park were about five miles from downtown, with a convenient trolley.

One “strong influence” at Forest Park High School was Ted’s friend Karl Shapiro (1913-2000), an iconoclastic thinker who later became the fifth Poet Laureate to the Library of Congress. Ted was also exposed to H. L. Mencken, writer for the Baltimore Sun who famously covered the Scopes Trial in 1925.

During the Great Depression Ted entered Johns Hopkins University in Baltimore. He said that his father convinced the university administration to let him study there for reduced tuition. In his freshman year (1931) he “persuaded a biology professor to supply him with fruit flies to be exposed to X-rays in his cellar laboratory. It was an attempt to alter their genetic pro-

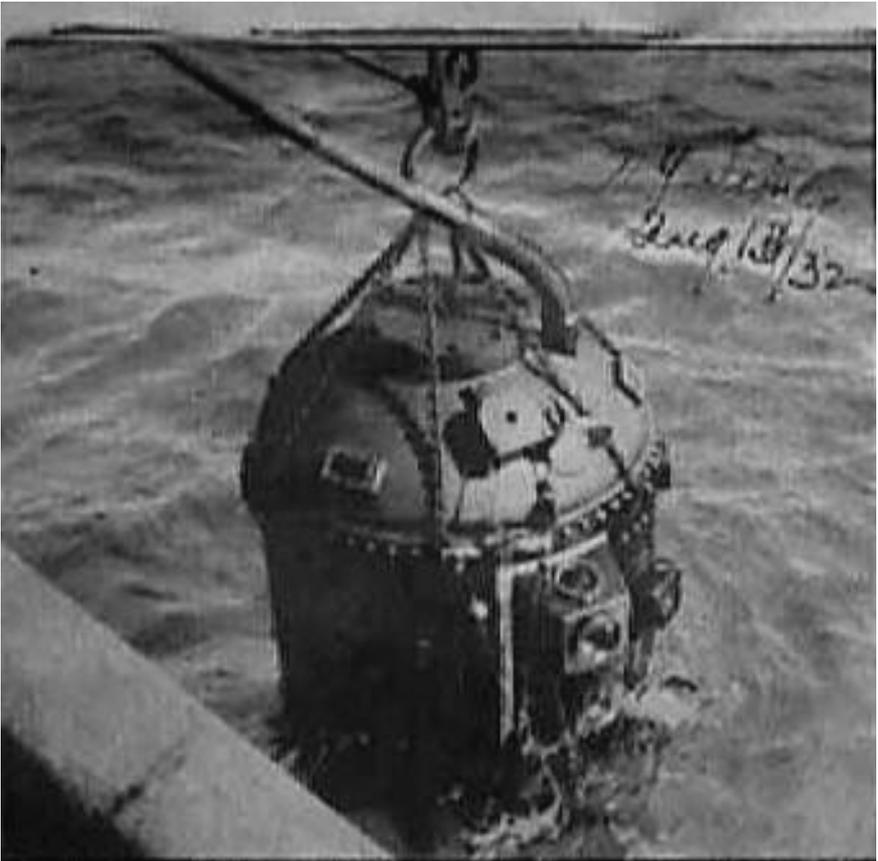


Ted's later illustration for a Tru-Lyin' story about how, as a child in his basement, he would receive calls for help from the U.S. President. (Note Ted's dog with pipe.)

files. Faulty electrical hookups were blamed for a fire that he later recalled seriously threatened their home, which ever after smelled of charred wood inside the walls." (From his *Wildegeest! A Search for Last Places* e-book, Chapter Four; Ted wrote about himself in the third person.) Ted said his parents did not complain about the accident, seeing it as a part of the cost of their son's education.

In later years, Ted fondly recalled his first car, purchased with money lent by his parents. It was a "Whippet" that cost "fifteen dollars." He and a friend worked on it to get it running, and then used it to take young women on dates. When he revisited Baltimore many years later with daughter Deede, Ted remembered that he used to drive through Druid Hill Park to Johns Hopkins University and park right in front of the school. He told his nephew Tom Freeman that sometimes when he only had a nickel for gasoline, he would pick up people along the way and charge them for the ride, then use the money to buy more gas.

He was 18 and still in school when he joined a salvage operation in search of sunken treasure. With great hopes of adventure and riches, he embarked with Captain H. L. Bowdoin aboard the S S Salvor on expeditions in 1932 and 1933. They planned to retrieve millions of dollars in gold, silver, and jewels from the S S Merida which sank in 1911 after being rammed by another ship 50 miles out from Cape Charles, Virginia. The Merida passengers included Yucatan aristocrats fleeing the Mexican Revolution with their money and possessions. The passengers all survived, but the fate of their possessions remained unknown. Ted wrote (referring to himself in the third person):



**A SEARCH FOR TREASURE OFF THE VIRGINIA CAPE
A DIVING BELL,**

Invented by Captain Henry L. Bowdoin, With Four Observers
Descends Into Thirty-five Fathoms of Water, Where the Merida
Sank in 1911 With More Than \$4,000,000 in Bullion on Board
Was Recently Located.

(© Submarine Salvage Corp.)

[He was] among those who descended 200 feet in the four-person steel diving tank to view the part of the hulk that was to be blasted open to reach the purser's office. About a year later, the purser's safe was recovered, and stockholders arrived aboard the SS Salvor to witness the opening of the safe and the viewing of its presumed contents.

The evening before this event, Captain H. L. Bowdoin informed [Ted] that he would receive an even share of the crew's ten percent of the treasured salvage's value. He asked [Ted] to consider dropping out of school and joining their next salvage expedition, but the Merida's safe was empty. Bowdoin's expedition ran out of money and that winter the SS Salvor sank at its moorings. (From *Wildeggeest! A Search for Last Places*, Chapter Four.)



Above, upper left: Captain Harry Bowdoin examines a platter with the Ward Line logo the first proof that he'd found the wreck of the SS Merida. In an act of supreme generosity, he gave the platter to Ted, who treasured it for 79 years.

Opposite page: The 4-person steel diving tank Ted entered to search for treasure.

Ted returned to Johns Hopkins and in 1935 graduated from the School of Engineering with a B.S. in Chemistry. As a young man he gained experience at a variety of jobs which used his chemistry and problem solving skills, and enjoyed his friends and sailing on the waters adjacent to his work.

His brother was not so fortunate. Sydney Miller was a high achiever who graduated law school with honors during the Great Depression. Unable to find work, and suffering the onset of manic depression, he attempted suicide. Ted found him and saved him. For some years following, he tried to keep his brother near him. There were years when Sydney would disappear into other places or institutions. In thinking about his brother years later, in Chapter 9 of his *Wildegeest!* book, Ted wrote:

Sydney, my big brother! How I looked to you for friendship and guidance when we were young, and what you gave me when we were older was an appalling demonstration of what it means to falter. Years of such tutoring, and my backbone stiffened with every twist and turn of your sad life.

In short, his brother's tragic life seemed to firm up Ted's course, that he would be strong and self-reliant.

His first job after college was in Baltimore, in 1935, at "Catspaw Rubber Co." where he worked on developing rubber heels and soles. In 1936 he began a four-year job with Foster D. Snell Inc., a consulting firm of chemists and engineers in Brooklyn. He was sent on a number of different investigative missions, including inspection of mattresses in 40 North Carolina furniture factories and cases involving food and department store products and hospital bedding. He spoke fondly of this period, of being in New York and keeping a sailboat on Long Island Sound.

For two years (1941-1943) Ted was head of the "Rubber Section" of the Office of Price Administration, Standards Division, where he helped to develop specifications and quality tests for tires, footwear, medical supplies and other items. His office was within the large "Economics" federal department headed by J. Kenneth Galbraith.

World War II necessitated a stint in the U. S. Army, Airborne Engineers, at a base in the state of Washington, where he fractured his femur in training and sat out the war. While on crutches, he wrote later, he volunteered in the

hospital's laboratory and worked with early model spectrophotometry. He developed improvements to the technology for measuring blood chemistry. He said that these improvements were reported to Walter Reed Hospital. He achieved the rank of First Lieutenant.

He thought of himself as a lucky man. Instead of dropping into a war zone, Ted advanced his research skills and, in the hospital, took watercolor painting classes. The painting lessons had a lasting effect. He used art throughout his life to tell stories and share his travels. Ted had a strong sense of design, whether in how he laid out a report, arranged his belongings in his home or set up buildings and garden spaces on his farm in his later years. He also worked hard at the craft of writing throughout his life, re-editing numerous times for better clarity and word use. He loved dictionaries and thesauruses.

The war ended and Ted resumed his work and adventure by setting up a research and development consulting firm aboard his newly purchased sailing schooner, Scotia Lady. From 1947 until 1950, he worked on contract for Chesapeake Biological Laboratory in Solomons, MD, exploring ways to use "marine byproducts," and for Kent Packing Company in Rock Hall, MD, where he looked at quality control and sanitation issues in the canning industry, using USDA guidelines. He became adept at photography. He had a darkroom at his office over the Rock Hall cannery, and later in the bathroom at his private lab, Marine Chemurgics.

The beautiful Scotia Lady was legendary. A few years before his death, Ted described her (from notes by Leslie Deede Miller):

She was a two-masted, gaff-rigged, two-man mackerel schooner built for Grand Banks fishing. Built probably near Lunenburg, Nova Scotia, which was famous for its racing schooners. She was twenty-eight feet at the waterline, about thirty-five feet from stern to bow sprit. She had a Grey Marine engine, twenty-five horsepower down below behind the companionway ladder. The galley was on one side of the companionway. There was a double bunk on the other side and space for sitting on each side, and an enclosed head below the waterline. Up forward was an anchor locker and a single bunk. Scotia Lady had tarred ropes, wooden masts and rings to hold the sails and dead-eyes. No modern fittings.

Ted thought the boat was built in the 1930s and had sailed to Marblehead,

MA before World War II. He thought she had been used in races to Bermuda. (See photo on next page of Ted sailing the Scotia Lady.)

Middle Life: Coming Ashore

In October 1948, a month before he met his future wife, Ted sailed the Scotia Lady from the Chesapeake Bay to Morehead City in search of a job. He later wrote, "Wallace Fisheries Co. agreed to sponsor a research and quality control program in Carteret County and in their Florida and Louisiana menhaden plants."

About his transition from bachelor sailor to married life, he wrote (in *Wildegeest!*, Chapter 2):

He had sailed from Rock Hall, Maryland after canning season, and tied up in Morehead City, North Carolina, proud of his mackerel schooner, "Scotia Lady," which he claimed was a cousin of the famous fishing vessel, "Blue Nose." But its care and maintenance was beginning to wear his wallet thin. He was kept busy patching the canvas storm and fair-weather sails; keeping ahead of the wear and tear on hundreds of feet of Manilla line; adjusting and tarring "deadeyes" to keep shrouds (standing rigging) taut; and battling invasion of shipworms into vital parts of the ship, especially the rudder post.

So much of their lives, after that, was triggered by this little ship. His urgent need for employment caused him to take a bus trip to Gloucester, Massachusetts to apply for a job. He met his future wife aboard a Greyhound bus, the night Truman was elected president. A story, repeated ad nauseam by one of his employers, "The first time I saw this man he was rowing a skiff to my factory, and casually asked for a job. He specified that it must leave plenty of time for sailing. A few months later he admitted he needed a full time job in order to get married. His bride put up with living aboard the schooner for only one week, then they moved ashore. Ted thought he was getting a Mate, but instead got himself a Captain!" (Guffaw! Guffaw!)

Sylvia Flower, a native of Philadelphia and graduate of Tyler Art School was on the bus leaving New York when Ted took the seat beside her. When she got to Boston on Nov. 2, 1948, she cabled her mother to say that "Harry and I



Ted sailing the Scotia Lady, his home for more than three years.

arrived safely," referring to Harry Truman's election, but her mother panicked, thinking Sylvia was with a man. In fact, she had met the man she would marry. Ted wrote to her in the following months; she said that his letters caused her to fall in love with him. They married outside of Philadelphia, in Elkton, Maryland, on August 22, 1949. He was 35 and she was 23 years old. Eight years later, they had four children and lived off of Highway 24, down a mile-long sand road, on Bogue Sound in Carteret County, NC.

Sylvia Flower Miller on the land for her new home at Bogue Sound. The first house was made of two buildings pieced together. For years, there was no phone.

But in chilly November 1949, as Ted and Sylvia moved off of the Scotia Lady, they rented their first apartment, part of a run-down house in the “Promised Land” section of Morehead City, about which Ted wrote:

*Our neighbors were said to be displaced pirates from the Outer Banks. When kerosene was stolen from our front porch, the police chief commented: “Well, if you want to live in a place like that, what can you expect?” Then, near Christmas, I came home with an end-of-fishing-season check for six hundred dollars (a small fortune!) and a bottle of wine. We abruptly informed our landlady that we planned to move, bought a secondhand Jeep, and then Sylvia found our permanent location in the country and on Bogue Sound. (From *Wildegeest!*, Chapter 9.)*

They bought their first overgrown acres on Bogue Sound in February 1950. On the property were a hunting/fishing lodge and another small building in which chickens had roosted. They combined the buildings to make their first home. After Cindy was born in May 1950, Sylvia temporarily tired of the rough living and the outhouse. Off and on for their years of childbearing they rented homes in Beaufort and Morehead City. Deede, Jennie and Todd were born in 1951, 1953 and 1957. Sylvia and Ted purchased additional acreage at the Bogue Sound home in 1951 and 1952, and in later years added some adjacent fields to the property. By about 1957 they were settled there. The

oft-told story about Ted's Scotia Lady was that the boat was sold so that the couple could afford indoor plumbing.

Ted wrote, in Chapter 2 of *Wildegeest!*, that the Bogue Sound house was "built slightly askew...to spare every tree." Thinking back sentimentally 50 years later, he was eloquent:

This hard earned clearing of land, in this thinly populated maritime county of the 1950s, allowed these city-bred people the rare opportunity to build their marriage "from the ground up" and an unexcelled chance to devote time and energy to the raising and enjoyment of their children during their formative years. One night, with their first two babies peacefully asleep and within safe hearing distance, they slipped down to the shore to watch an eclipse slowly erase the sparkling moonlit pathway of light across Bogue Sound, and then to listen to the surf crashing on the isolated ocean beach, only a mile away. They were silent during this entire event until she turned to him and said, "We must stay here for the rest of our lives."

(A lunar eclipse at midnight on September 15, 1951, would have been visible from the east coast, according to Google web sites.)

Their first home, made of the two buildings pieced together, was about 100 feet long, with one room leading to the next in a long string. The kitchen and porch stuck off of this line of rooms, attached to the living room. The kitchen fronted the driveway while the porch faced Bogue Sound. For years, there was no phone, the electricity went out frequently, and mosquitoes jammed up against the screened windows in the summer, trying to get in. Without air conditioning, the family took turns sleeping on the chaise lounge on the porch, the coolest spot to be in summer. The Mayola milk truck came all the way down the sand road to deliver.

A few hundred feet north of the house, Ted built Marine Chemurgics, Inc. The design was plain, a one-story building with a flat roof. A sidewalk started about 15 feet out, leading to the front office, and the office/library area led to a hall. At either end of the hall were rooms for chemical work, with counters, cabinets and large sinks and exhaust fans. Off of the lab on the west side was a long concrete-padded section with a peaked tin roof. There were separate pens with four-foot-high doors on either side of the walkway. In these pens, Ted housed growing chickens, testing their weight and health

with varieties of fish-meal-enhanced feeds. He sometimes tested 500 chickens at a time. The tiny chicks arrived in cardboard boxes and were kept under hot lights at first. As they grew they were moved into the larger pens.

On the north side of the building was a fenced field where he kept cattle for other feed experiments. Much practical knowledge in maintaining livestock and getting things done came from Ted's partner at Marine Chemurgics, Julian Weeks. Julian grew up in the area and owned adjacent property, and he knew fishing and farming. He later ran his own menhaden fish company in Beaufort. For four years he was married to Sylvia's sister Elaine Flower and thus became "Uncle Julian" to Ted and Sylvia's children. Julian Weeks remained a close friend till Ted's death. At the memorial service he described how seamlessly they had worked together.

During fishing season Ted left on multiple two-week trips for Wallace Menhaden, often to Empire and Cameron, Louisiana. Sometimes the couple hired a local man to drive the family while Ted was away; Sylvia (with her city background) never cared to drive. While the children were young, Ted's parents lived on the property too. Louis and Cecilia built a house next door, making the house larger than they needed so that eventually, when they moved on to Florida, Ted's family could move in and finish the upstairs, providing more room for the family of six. Cecilia taught the children to play the piano and helped Ted in his laboratory with secretarial work. Louis met the school bus on Highway 24 and ferried the children home.

Marine Chemurgics had other employees. Ted's four children washed glassware, weighed chickens, cleaned animal cages, filed "abstracts" of scientific journal findings, swept, raked, painted fences and cleaned crabs. When the children were older, they each helped at various times as lab assistants, researchers, writers, editors or in the case of Deede, as a skilled illustrator.

The yard between the homes and the lab held a horse pen, chicken yard, orchard with pear, plum, apple, peach and pecan trees and a grape arbor. After the "pilot plant" was built (see below), the four buildings were surrounded by a white board fence. Pets included various beloved dogs, cats, Deede's horse, Gypsy, and occasional chickens that would be named and become favorites. Daily walks up the long sandy road toward the highway, often after dinner, were picturesque with the accompanying unleashed dogs, cats, horse and sometimes a pet chicken.



The Miller kids enjoy an outing with fresh clams: Cindy, Deede, Jennie and Todd

Sylvia was called “Mama” and later “Dock Grandma” for her endless hours of watching children play in the warm shallow waters, but to all the children, including the more recent great-grandchildren, Ted was simply called “Teddy.” He was both the more distant of the parents while he was deep into his work and the most fun when it was time to go out on Bogue Sound and find a weekend adventure. These excursions often involved taking a hibachi and a bag of pine cones, a frying pan and water, and finding food on the islands and from the waters for a very fresh seafood picnic. Dogs and sometimes cats came along on the boat. The boats ranged from a wooden rowboat called Hogwash, to a wooden raft on four 50-gallon drums, to a series of Ted’s sailboats. The unnamed raft was big enough for a tent, and usually the children would power it from below while Ted made a fire in the hibachi above and called out for clams, scallops, crabs or oysters for the chowder pot. It was destroyed in a hurricane.

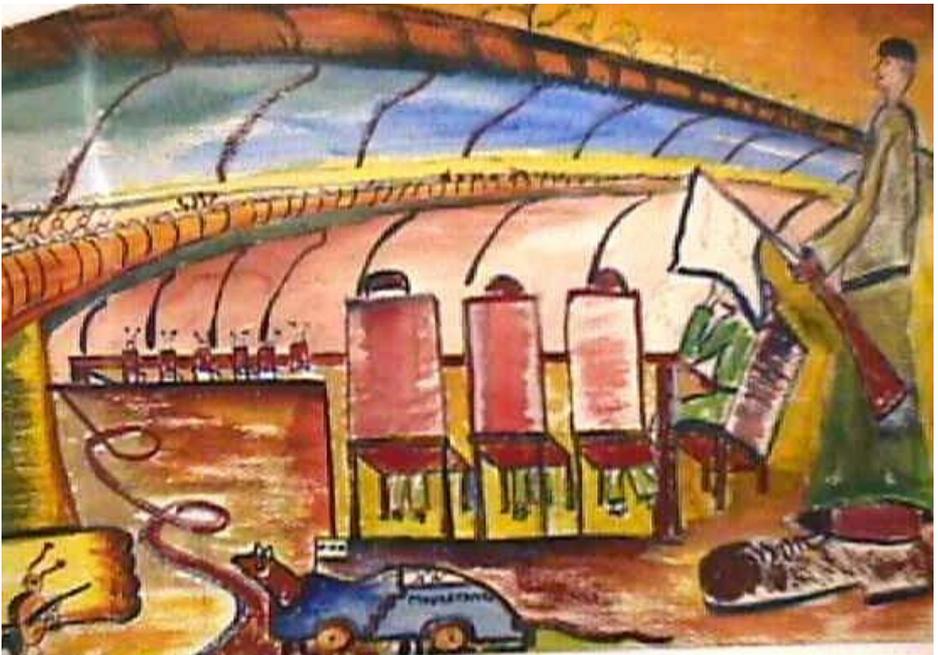
Dipping into a few details, Ted wrote colorfully in *Wildegeest!* Chapter 7 :

...we sailed an 18-foot wooden sloop, named Luv, a boat that Chesapeake Bay watermen used to describe as a sharpie. Only 45 minutes was required to cross Bogue Sound to the totally unoccupied ocean beach (now the heavily

populated Emerald Isle). When we returned to our home mooring, a wasp would fly from shore and enter its residence somewhere under the forward deck, a happening we observed for many years. Frequently, we were greeted by a covey of thirteen mallard ducks, who bivouacked in our yard. They would join us while swimming, and during hunting season were given full diplomatic immunity, as certified members of our household.

Unlike most people, Ted understood what he saw in the night skies. He usually knew where and when the moon would appear, and its path relative to planets and stars. His telescope was powerful enough to see the rings of Saturn, the moons of Jupiter, and the moon's craters up close. The clear dark skies in the open fields behind Ted's laboratory made for easy viewing on winter nights.

Memorable for all the children in Ted's life were his "Tru-Lyin' Stories." Ted was always the hero of these stories, along with his German shepherd Corny whom he later described as "a field-grade commissioned officer in the Army of the United States, capable of astounding deeds and responsible only to the President." The President of the United States often called to ask for help; sometimes this call came via the steering wheel that would "light up"



and instruct Ted to “turn sharp left” into a new world, sometime splashing into the sea or falling into a hole where he would fall “down, down, down” (voice lowering with each “down”) for seven days, or blasting off to another planet or even the star “Beetlejuice.” In a zippered chamber in his hand, Ted had a full “travel kit” of emergency supplies, including little and big pills, outboard motors and scuba diving gear.

The room had to be dark when Ted “read” these stories to the children from a book in his head; adults were never allowed to listen. The pages were turned manually by twisting his ear. He would always begin to read when he reached “Chapter I-X, One Hundred and Seventy-Seven D, Column J.” Each child created pictures in their heads as they listened, but some of the favorite tales merited official illustrations by Ted himself, in watercolor or tempera paint, which when exhibited decades later, in Hillsborough in 1998, were much appreciated by a larger audience. (See pages 5, 16 and 19 for photos of these drawings.) In his later *Wildegeest!* writings, Ted referred to these Tru-Lyin’ stories and added a cast of new characters who accompanied him on his newer adventures. He was the same creative storyteller in 2000 as he was in 1960.)

Immersed in Fish Oil Research

Ted’s laboratory smelled of chemicals and old books. He could fascinate his children and their friends with his beakers of solutions changing colors. During fishing season another odor dominated: Ted returned from analytical work in the factories smelling strongly of the “cooked” menhaden fish and oils products. Local people, during menhaden processing season in Beaufort and Morehead City, said that the odor “smelled like money.”

A bony, oily fish, menhaden was this country’s earliest fishery and a food source for most other fish. Menhaden had many industrial applications. The oils were used in products as various as house paints and lipsticks, and the solubles were added to animal foods. Later, the oils were used in human

Illustration at left: One Tru-Lyin’ story, titled “The Bogue Sound Tunnel,” tells the story of ants going to war with the USA over loud military airplane noises from Bogue Air Field. The ants dug a tunnel to a Bogue Sound island. The conflict ended when the US agreed to limit their military aircraft to silent gliders. A specially constructed peace table allowed the ants and humans to meet at the same level.

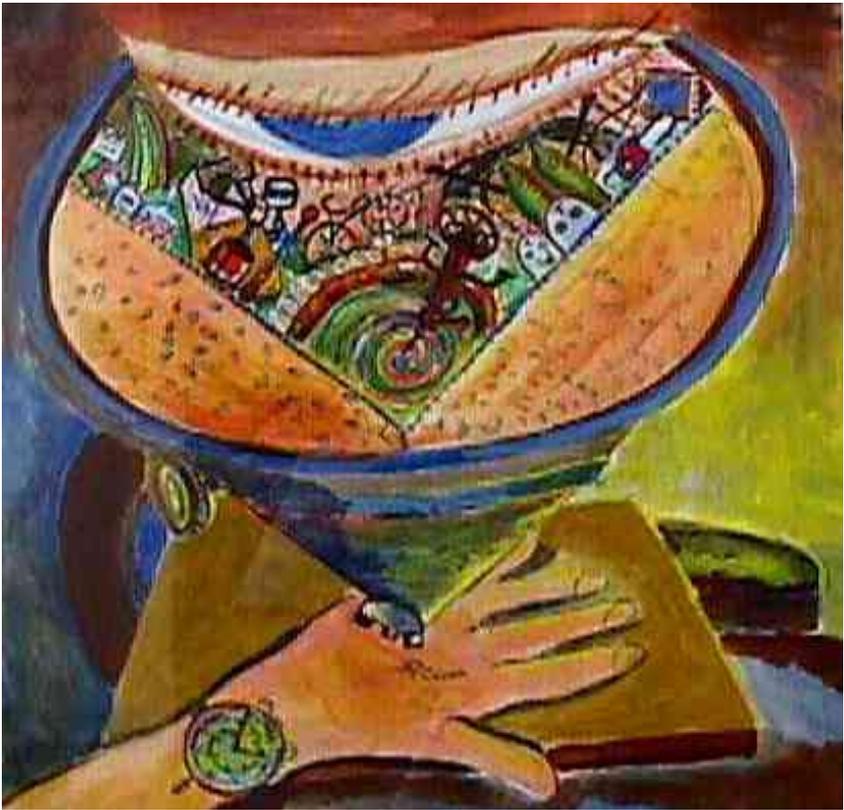
heart-health research studies.

Throughout his decades with Marine Chemurgics working for Wallace Menhaden Co., Ted also collaborated with others around the world who were interested in fish oils. Ted's immersion began in 1949 when he operated a field laboratory in Cameron, Louisiana, during Wallace Menhaden's entire fishing season. In his *Wildeggeest* web site ("Founders' Qualifications"), Ted described that early work: He used antioxidants as preservatives, conducted "salmonella surveys," improved quality control, took fish oil inventory measurements, "BOD measurements," "barge loading surveys," and worked with "high capacity pasteurization equipment" and "scrubbing tower designs."

Amidst this heady mix of invention and practical application, he became chair of the new Technical Committee for the National Fish Meal and Oil Association, helped formulate research plans for universities, and began work on industry-government projects. He worked with industries, such as Eastman Chemical, on uses of antioxidants in fish products. Along the way, Ted learned about relevant "complex chemical reactions, the oxidation of fish lipids, the damaging effects of elevated temperatures, the toxic substances that are generated" (Founder's Qualifications, *Wildeggeest* web site). This knowledge informed his work in his later years on healthy sources of fish oils.

He wrote a bulletin titled, "Fish Oil, A Material with a Thousand Uses," which, in the mid- to late-1950s, caught the attention of several leading researchers on human heart disease. Years later, in 2010 as Ted castigated a Harvard research director about her use of fish oil esters in a human health study, he referred to his 1955-1958 work and correspondence with Dr. Edward "Pete" H. Ahrens, Jr., Rockefeller Institute of Medical Research. Their collaboration led to an early article on fish oils and human health in *The Lancet* (January 17, 1959). Referring to that collaboration, Ted told the Harvard researcher, "At the request of Dr. Ahrens, Marine Chemurgics produced five gallons of menhaden body oil, suitable for clinical research, a landmark experiment since their program included development of virtually unknown gas chromatography lipid determination methods."

Another mentor in the 1960s was Dr. John Lovern, Director of Torry Research Station, Minister of Technology, Aberdeen, Scotland. Lovern was one of the first "fish oil chemists" and the two men established a friendship including visits to each others' homes. Ted wrote on his website:



The hero in Ted's Tru-Lyin' stories used a Travel Kit accessed through a zipper in his hand, viewed with this microscope. Items that saved hero and dog included a chemistry set, bike, Little Pills, Big Pills, parachute, chainsaw and outboard motor.

*There were critical decisions to be made about the application of chemical preservatives to the huge industrial fish landings. This led to projects aboard fishing vessels (in cooperation with American Cyanamid Co., Lederle Laboratory) that included trials with antibiotics! Nitrite assisted fish preservation in Norway produced toxic feeds, and led to the discovery of carcinogenic nitrosamines. Marine Chemurgics investigated the unknown animal protein factor (APF) that greatly improved the performance of animal and poultry rations. A few years later, **this substance was identified and named "Vitamin B-12."***

In other examples of his work which offered collaboration and adventure, Ted recalled:

A Norwegian fish oil, offered for human consumption, was almost tasteless. It was produced by a "heating process." Our tests quickly revealed growth-

inhibiting properties, part of our increasing awareness that damaged fats reduce bio-availability and produce damaging physiological effects. We observed brain damage in animals fed oxidized fats (Encephalomalacia), and lysine deficiencies when protein meals were overheated, causing "bareback" [in poultry].

Ted wrote that in the early 1960s as a member of the International Fish Meal and Oil Association's Scientific Committee, he attended meetings in Aberdeen, London, Vienna, Rome, and visited facilities in the United Kingdom, Germany, the Netherlands, Norway, Iceland, Denmark, Sweden, and Finland. In Poland, he inspected and photographed a factory ship in G'Dansk harbor (policed by Russian guards), and met fishery scientists in Moscow.

A federal/local economic development grant during 1966-1969, which was called the Carteret County Seafood Processing Project, allowed Ted to build a second laboratory building. This building, which the family called "the pilot plant," modeled a seafood processing plant but with equipment for experimenting with new techniques. The pilot plant had a variety of cookers, refrigerators, flash freezers, stainless steel sinks and counters, with concrete pad floors sloping toward a system of drains to eliminate organic waste.

In "Founder's Qualifications," Ted described the early days of this research:

The project received full cooperation from the county fishermen and dealers. It developed improved preservation, handling, dressing and marketing information, and plans for a cooperative processing plant. New products were developed in the pilot plant including oxygen-resistant fillet packaging, meals in boil-in bags, fish sausages and a host of other imaginative products. The project was selected by EDA as a success story for demonstration in the U.S. Capitol, Speaker's Dining Room, Washington, DC, March 18, 1965, well attended between sessions of the Senate and House of Representatives.

Starting in the early 1960s Ted began sharing research with NCSU's Food Science Department and Dr. Frank B. Thomas. In 1971, NCSU set up its first seafood extension facility at the site of Ted's pilot plant, while construction began on a permanent Seafood Laboratory in Morehead City. In September 1972, Ted was appointed NCSU's Seafood Extension Specialist and in 1973 the new Seafood Lab was completed. From there, Ted worked with small seafood processors, university scientists, and with local women who cooked

for their families and communities, to work out nutritional recipes using available resources and taste panels. In January 2012, an article from NCSU's News Center recognized the achievements of one of the groups, called Nutrition Leaders, as follows: "The group – considered the only one of its kind anywhere – had begun in the 1970s by supporting Extension efforts that food science specialist Ted Miller had started at N.C. State University's Seafood Lab. A newsletter from that era noted that 'the food scientist has a vast storehouse of information about seafoods, the changes which occur as a result of storage, aging and application of heat,' while 'homemakers, on the other hand, have a great deal of kitchen expertise of their own gained from experience. By working together they hope to come up with some findings that will be mutually beneficial.'" From <http://www.cals.ncsu.edu/agcomm/news-center/perspectives/lifelong-learners-lifelong-leaders/>

On the web site for Ted's obituary in 2012, the current head of NCSU's seafood extension service, Dr. David Green, wrote: "Ted was a pioneer in his field and truly a remarkable person. While I did not have the opportunity to work with Ted professionally, I did have the occasion to visit and talk with him by phone. Ted will be remembered for different reasons by different folks. In my case, if it were not for Ted Miller, the NC State University Seafood Lab in Morehead City and quite possibly CMAST [NC State Center for Marine Sciences and Technology] would not exist today. Thank you, Ted, for your steady hand and open mind. You will be with us in spirit forever."

As part of his seafood extension job, Ted enjoyed trips aboard the 80-foot NC research trawler MV Dan Moore. Ted described the boat in his ebook:

The State of North Carolina research vessel, Dan Moore, was manned by captain and crew from Harkers Island. She was an impressive 80-foot stern trawler, state of the art construction and layout for those days, and equipped 'tween-decks with laboratory and two bunks, next to a "cold room" containing refrigeration equipment and a saltwater ice-making machine. The Seafood Laboratory had constructed two wooden tanks measuring 4'W x 8'L x 4'H. One was placed on deck and filled with circulating surface sea water, and the other was placed in the cold room and filled with sea water chilled to just above freezing.

The cold water tank was designed for an experiment in catching lobsters offshore in summer temperatures. In Chapter 7 of *Wildegeest!*, Ted de-

scribed the experiment and one unexpected “catch.” One of the missions of the Dan Moore was to investigate . . . *the extent, distribution, and location of lobsters along the North Carolina coast, all the way out to the edge of the continental shelf, where depths reached 300 fathoms. Collections required powerful winches and extremely heavy gear, which, it was feared, might impose physical damage and severe pressure and temperature stresses on the lobsters.*

Things went swimmingly well for men and lobsters on this first trip to the edge of the continental shelf. The lobsters were caught in encouraging numbers and survived well in both tanks. We looked forward to an uneventful voyage until that night, north of Cape Hatteras, when a Navy depth-charge was dumped on the deck along with lobsters and by-catch.

I was in the laboratory, when I heard the thump, followed by complete silence, then the sound of heavy boots scampering towards the bow. The captain yelled for me to grab flotation gear and come on deck. We clustered in front of the pilot house while he called the Coast Guard (CG). Meanwhile crew members reported that the unwelcome visitor was giving off a purplish glow. CG asked the Captain about numbers and markings on the outside of the mine. I started aft to check it out, when I heard a shout, “Ted Miller, get your ass out of there, you ain’t a member of this crew!” Shortly thereafter, a message came from CG: “You have a dangerous mine on board. Don’t move, a Coast Guard vessel is on the way.”

Everyone, except captain and mate, spent half the night locked in the galley behind steel doors, and were then permitted to squeeze through a man-hole and huddle near the bow. . . . When the Coast Guard vessel arrived, it remained over a mile away. We proceeded to Norfolk, where it was gingerly unloaded by Naval personnel.

In his work for the Seafood Laboratory, Ted conducted weekly extension visits and services to NC seafood processing facilities up and down the coast. Ted had to close Marine Chemurgics during his five-year stint with NCSU’s Seafood Lab. At age 65, he resumed operation of Marine Chemurgics, primarily working on industry-government peer-reviewed projects. During the 1980s he regularly produced reports with university and industry advisors for the Mid-Atlantic and the Gulf and South Atlantic Fisheries Foundation. His projects included reports on cooking techniques, use of fish purees, and

freezing techniques for “food-grade menhaden.” He also delved more deeply into chemical analyses of fish fats by working with government and university laboratories which were equipped with the latest measuring instruments and computers.

From the early 1970s until 1983, Ted looked after his aging parents, who moved into the one-story house at the family compound on Bogue Sound after his father, Louis, became ill. He died in 1974, and Ted and the family watched over Cecilia. Ted became increasingly interested in nutritional cooking techniques and appliances designed to assist the elderly. He wrote an illustrated manual titled “Grand Cooking – A Grand Way to a Long Happy Life,” while experimenting on his mother with delicious full meals steamed in a unique one-dish cooking apparatus. Ted spent considerable time and money applying for patents for this technique, though his efforts were apparently futile. Cecilia Miller died in 1983.

The Last Twenty-two Years: *Wildegeist!* and Earth-Wise Farm

After his wife Sylvia died in March 1990, Ted closed his laboratory and, at age 76, embarked on a series of travels with his golden retriever through the US, Mexico, Alaska, the Yukon, Northwest Territories, Labrador and Newfoundland. He went in search of a new life. But he found what he already knew,



Home on the road – one of a series of truck and trailer combos that Ted used.

about the value of imagination, nature, healthy diet, community, research, writing, and visual arts, and fish oil.

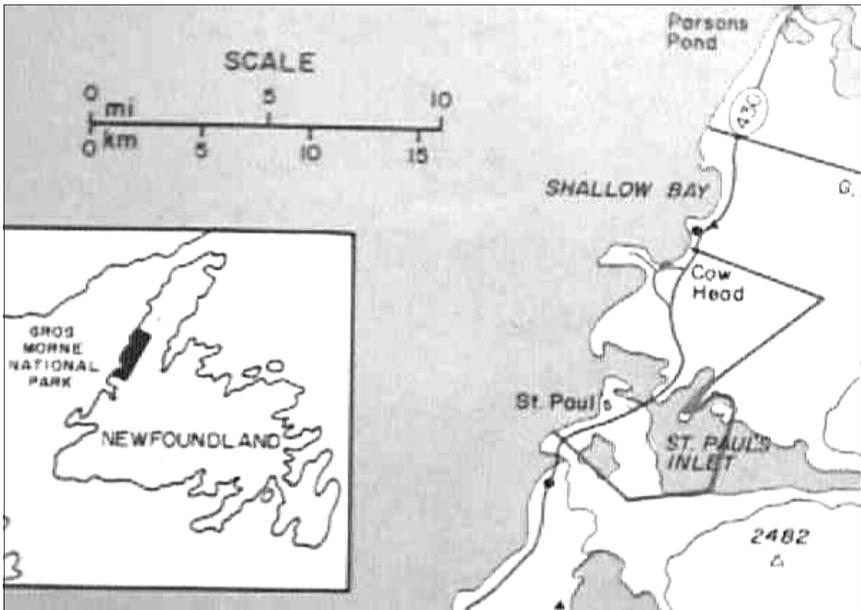
He camped, at first in a tent and then in a series of campers, searching for the most efficient and “ship-shape” style; he fastened on the idea of a narrow bunk as his preferred bed, and later built that into his home at Earth-Wise Farm. His explorations were extensive – logging over a quarter million miles in ten years. He began making annual trips to Newfoundland, where friends welcomed him. In 1992 he built a small cabin near the old port of Cow Head on the Gulf of St. Lawrence. He had a new and valued community for half of each year.

In Newfoundland, he found someone who knew someone wherever he went, and before long, everyone seemed to know Ted and his dog. He collaged his trip photos and memories, and brought Newfoundland to his friends and family in North Carolina via writings, video, photos and artwork. Newfoundland friends visited him in his home community of Ocean, on Bogue Sound, and NC friends and family visited Ted and his friends in Cow Head.

During the 1990s, as he continued his travels and spent more time in his Cow Head cabin, Ted wrote extensively about how to survive the loss of a spouse, and how older people can remain productive and independent. He let his imagination rip and roar in his e-book *Wildegeest! A Search for Last Places*, written from 1999 through 2001. After that he composed a sequel which he printed through Xlibris publishing company and titled *Wildegeest! A Search for Last Places, Sequel: He Found Newfoundland*.

In the Prologue to his ebook, he explained how his travels began:

The man's expeditions in search of last places began just before Labor Day, 1990. Dora quit her job as "household pet" and accompanied the "seeker" to the west coast of Newfoundland in a Jeep crammed with food and camping gear. He was attracted to "The Island" by its name, which implies, "Fresh Start." Another incentive was its location, a comfortable 2.7 thousand miles from Florida, with its hordes of grossly overblown recreational vehicles (RV's). This pattern of out of season, counter-current travel was to be repeated and refined each succeeding year, without much planning of actual destinations, but preference for climates that would weed out tourists. An important objective was to find unusual, unrehearsed, and memorable adventures.



Ted bought a cabin in Cow Head, Newfoundland in his search for an ideal home.

In late 1994, after returning to his NC home, Ted visited his granddaughter's school near Hillsborough, to show a videotape and tell tales of his travels, engaging about 80 children by having his central character be the now infirm and blind dog Dora. The children petted her. A few months later, she died. In Durham, Ted found a golden retriever male puppy, and named him Theodore, or Theo for short. Theo became a central character in real life travels and in the *Wildegeest!* writings and web sites.

One dear friend of Ted's from Newfoundland, Todd Hiscock, wrote to the family six months after Ted's death: ". . . not many days go by that we don't think of him and lots of times in conversation. . . . Actually just a few days ago we were talking about the time he arrived with Theo after encountering a skunk enroute. He had apparently cleaned him in a motel bathtub in tomato juice but of course when he opened the door and Theo came in, all we could smell was skunk. . . . I think the most he saw in Newfoundland was a simple way of life with generally nice people willing to work with themselves and others for the greater good, much like his attitude."

With Todd, his wife Irene, their family and other close friends, Ted experienced backwoods moose hunts, skidoing, berry picking, home parties with

conversation, music, singing and dancing, Jiggs dinners, whale encounters, and lots of fresh seafood and produce. He could drive a short distance to get clean drinking water out of a hole in a rock, bringing it back to his cabin in jugs before he figured out a more convenient plumbing arrangement.

He worked on his manuscripts and food experiments but it was never very long before someone was knocking at his door to check on him or visit. In fact, he would sometimes load up Theo and drive to an empty gravel pit just to get a nap! He described the importance of this support community in Chapter 10 of his ebook:

...mentally and physically active older people had better not trust their planning to others. Instead, they should think about the quality of life they wish for in their later years, and a dependable support system needed to achieve it. I was determined to regain that precious feeling of being in control of my own life. . . . I wanted to shed the encumbrances of 'civilized' living; to get the feel of direct encounters with remote, rugged, out-of-the-way places; to read, write, and record experiences in some artistic way; and to plan projects designed to permanently keep me mentally active and challenged.



Ted's farcical self-portrait as a suave, skilled sportsman. He wrote, "make-believe gave [me] confidence to meet and get along with total strangers."

Life without human companionship was at first very difficult, and loneliness would have presented a serious threat, if friendship and hospitality had not been so generously offered by total strangers along the way. I considered each encounter important and rewarding, and arranged to keep in touch by sending letters and photographs. Now I have a long list of friends, some in remote places, and I manage to touch base with them at least once a year.

He also expanded his North Carolina community by exhibiting his paintings, collages and videotapes at the Hillsborough Artists Cooperative gallery on May 16-17, 1998. He later said that the experience synthesized his plans to gather his thoughts into a book, and thus it was that in 1999 he began writing *Wildegeest! A Search for Last Places*, publishing a chapter a month on his web site, till he finished the 325-page work with an Epilogue in 2001. He peopled the tale variously with real characters from his travels and a sassy talking horseradish plant. Some of the Tru-Lyin' stories and illustrations and his travel photos and collages also appear in the online manuscript. The book stars the following characters, two of whom were still alive at the time of completion: "The man" - Ted M. Miller (1913-); Mentor - Jonathan Swift (1667-1745); Imaginary Friend - Edward (Ed); Retired Housedog - Dora (1982-1994); "Bestfrienddog" - Theodore (1993-).

Even before he began actively planning his Earth-Wise Farm, Ted had turned his focus to the importance of a healthy diet, especially for aging people. In Chapter 6, titled "Man and Dog Travel on Stomach," he ranted against toxics, pesticides, food additives and processed foods, and lauded the pristine environments and lush gardens he found in Newfoundland. In Chapter 7, he described his home-baked bread and home-grown sprouts, and wrote:

My methods are simple, direct, and quickly told. . . . Basically, you need rather thick, even heating, non-stick cookware - fry pan, soup pot, sauce pots, and cast iron stuff for the oven. Most things are stir-fried, cooked in water or steam, or baked. Cold-pressed olive oil is the fat used in small amounts in stir-frying, and even then, it's not heated directly, but mixed with the first combinations of cut-up vegetables before applying heat. If the fat is to be subjected to higher temperatures, as in pan frying, I limit the amount to what is required to coat the fry pan, i.e., a few grams of butter, or fat rendered from about 10 grams of chopped up salted fatback.

So all I can do is offer my conclusion that the wrong kinds of fats, the wrong

cooking methods, and the over-consumption of fats may be the primary food-related health hazard (including cancer) facing populations all over the world.... I think the safest approach in cooking with fats is to limit them to cold-pressed olive oil, salted fatback, and butter.

He began planning Earth-Wise Farm in 2000, and by 2002 he had built his new barn home, using a steel Morton building. With the farm, Ted planned an approach to healthy living which emphasized freshly grown food, a test kitchen, a computer station for writing about his findings, his dog, his bunk, his dog's bunk, and his books, all in one big room. Outside he and his help cut back vines, reclaimed trees, nourished the soil, rotated grasses and vegetable crops, planted a variety of fruit trees and berry vines, and added sheds and raised garden spaces over the years. He hired a number of workers and also enjoyed a number of volunteers.

Each season he planned new approaches, bought seeds and plants, tilled, fertilized, planted, harvested and tilled again. He experimented with ways of preserving abundant fruits and vegetables, and sometimes ground freshly harvested buckwheat and grains for pancakes and breads. He communicated to his list of people he had met, people interested in his work, and others whom he hoped to reach with his message through email bulletins and letters. Though he was in his nineties, Ted had work to do and sprang out of bed eager to get started after a hearty breakfast early each morning.

His interest in the benefits of omega-3 fatty acids was renewed as his research into healthy aging deepened. Though he experimented extensively with vegetable sources, his background in fish oils emerged as he examined the unfolding reports of the difficulty of humans to effectively absorb omega-3s from flax and other sources. He began again to believe that carefully selected and well processed fish oil offered the most benefit and thus he launched his final focus on that topic.

A careful diet and avoidance of bad foods, combined with a good fish oil supplement, imbibed along with an emulsifier (yogurt or buttermilk) and foods strong in antioxidants (such as berries) offered the best omega-3 opportunity, he believed.

He set about thinking of ways to prove his theory about the benefits of fish oil. After much searching, he found what he considered a superior product:



Above: Ted's home (Morton building) and equipment at Earth-Wise Farm.

Below: Herbs and salad spread in the raised garden beds in the front yard.





Ted inside his home at Earth-Wise Farm. The colorful rainbow wall-painting extended across the whole ceiling, creating a cheerful mood for the big room. Refrigerator, stove, cabinets, desk, computer, reading chair – everything ship-shape and close at hand.

wild-caught, sustainably harvested and carefully processed Alaskan salmon oil for sale by a company called Vital Choice, based in Bellingham, Washington. He subsequently became good friends with the company's founder and owner, Randy Hartnell. They shared ideas and research about the importance of a healthy omega-3/omega-6 balance in the human body. Describing the problem with the balance in the current population, the people at Vital Choice summed it up thusly (in their January 2013 online catalog at www.vitalchoice.com):

Until about 50 years ago, human diets contained about three parts omega-6s to one part omega-3s. Today, the average American's diet contains about 20 or more parts omega-6s to one part omega-3s . . . largely due to a steep rise

in consumption of vegetable oils high in omega-6s (e.g., corn, soy, cottonseed, sunflower, and safflower). This historically unprecedented imbalance is proven to promote inflammation, cancer, heart disease, diabetes, dementia, and other health problems. Omega-3 and omega-6 dietary fatty acids compete for passage into your cell membranes – and eating too much omega-6 fat, as most Americans do – will keep your cells from getting enough omega-3s and will also promote chronic inflammation.

Randy Hartnell recalled how Ted had telephoned him, saying he was looking for an “uncooked” fish oil for some experiments. Randy said:

In introducing himself he shared that he had been involved in bringing the first human grade fish oil to market in 1959, which I found quite amazing. It was an honor to meet someone who had played such a pioneering role in what has become such an important, multi-billion-dollar industry, as well as one so knowledgeable who validated the superiority of our product. Among other things, he went on to tell me how he had at one time conducted experiments feeding “cooked fish oil” to chickens, only to discover that it stunted their growth! I found this insight quite fascinating and have since passed along his story countless times.

Randy visited Ted at Earth-Wise Farm in 2006 and shared a “fond memory” from that visit:

...when we went down to the waterfront to buy seafood for lunch. Ted instructed me to get into his truck, but advised that I'd have to sit in the back. At first this seemed odd since there were just the two of us, but I soon realized that “bestfrienddog” Theodore would be accompanying us and that the front seat had been removed to better accommodate his comfort. That was priceless. I really miss our frequent communications, but he and his memory will continue to inspire me for the rest of my life.

Ted’s research files and email bulletins proliferated. Often he had not one but two computers going, as he kept up with the latest findings via Google list-serves and his own Internet searches. Additionally he read scores of cookbooks and food magazines during the years at Earth-Wise Farm, and experimented with recipes, trying to incorporate fish oils into breads and sauces. At his table, friends and family might wonder at the faint taste of fish in their salad dressing or pancake.

In 2008, Vital Choice lauded Ted in their newsletter, recalling how in the 1950s he was:

...approached by the Rockefeller Institute of Medical Research whose researchers wanted to conduct a medical study of the effects of fresh, purified fish oil on peoples' blood fat profiles. Excepting unrefined cod liver oil, fish oil was produced only for industrial applications, and the processing methods made it unfit for human consumption. Ted's team worked hard to figure out how to keep their menhaden oil's delicate fatty acids—including omega-3s—intact during production, and finally succeeded in producing the five gallons needed for the study.

That same year the Swansboro newspaper wrote a length article about Ted:

His most recent endeavor is a joint effort with Jim Phillips, owner of Clyde Phillips Seafood in Swansboro, and a former Alaska fisherman [Randy Hartnell from Vital Choice] from Washington State.

Pretty much everyone agrees that fish oil has many health benefits, but Miller says the fish oil capsules you buy in the pharmacies can be over-processed, distilled or denatured thus don't contain the nutrients pure oil does.

Miller met Randy Hartnell on the Internet while researching fish oil and they discovered they have a similar view of nutrition, in particular with regards to Omega-3 fatty acids. Hartnell's product is as close to fresh as possible. The freshly caught wild Alaskan Sockeye salmon are taken from the boat to a dedicated plant where they are cleaned and the oil is removed, deep-chilled and stored. It is then transported to a licensed facility where it undergoes simple filtration before being bottled or encapsulated in fish-based soft gels.

After speaking with and meeting Hartnell, Miller introduced him to his friend, Jimmy Phillips, who decided to begin selling the pure fish oil capsules at his fish market.

"Coastal fresh fish markets such as Clyde Phillips Seafood offer fatty fish that can meet the twice-a-week requirement," Miller said. But even the local fresh fish is in need of an Omega-3 boost.

"I've known Ted Miller for at least 40 years if not longer," Phillips said. "He's a remarkable man. When he asked if I wanted to try selling these fish oil capsules here, I figured it would be a good idea."

Although there isn't much in the way of advertising them, the pure Alaskan

salmon fish oil capsules are selling from his fish market pretty well.

“The reason I’m so strong on this particular oil is because it’s almost as if you ate the actual salmon,” Miller said. He added that we as a nation need to also limit our fast food, fried foods and sugar intake and we need to eat foods as close to their natural state as possible.

“We need to eat the rainbow colors. We have gotten away from range-fed



Randy Hartnell of Vital Choice, Ted and Theodore outside the Earth-Wise Farm home.

animals in the last 50 years,” he said. And, according to Miller, it doesn’t matter how much fish oil is taken if the rest of the diet isn’t healthy.

In 2000, Miller began a new venture — a pesticide-free farm growing produce and grains on his property adjacent to Bogue Sound. He also continues to work for his Wildegeest Foundation, which he began in 1990 to encourage people that there is life after 50.

“In fact,” said Miller, “that’s when people should really start thinking about what they want to do with the next half of their lives.”

— Annita Best, “Ted Miller Touts Benefits of Fish Oil,”
Tideland News, November 26, 2008

Ted’s first human trials were on himself, monitored by his general practice physician, Dr. Scott Rice, who tested Ted’s blood levels regularly. Ted was already in remarkable health for his age, but he believed that he added years to his life through his diet and fish oil supplement. He wrote of this on his web site (www.wildegeestfoundation.org), and as he developed larger human trials he described those as well. On the web site, he stated:

Current knowledge concerning the structure, chemical and physiological properties of fats and oils, and how fatty substances relate to human nutrition, has been learned since 1950. Fishing industry and government sponsored research conducted by Marine Chemurgics Laboratory at Ocean, North Carolina, resulted in increased awareness that humans, animals and poultry required carefully prepared “good fats” and demonstrated the damaging effects of fats degraded by rancidity, secondary oxidation, and overheating.

By 2007 he had launched the first of his three “Fish Oil Therapy” projects. On his web site in 2011, he summed up the findings:

- *Fish Oil Therapy Project: found EPA/DHA deficiencies in many participants*
- *TryNet Project: some results confirm theory that the fish oil supplements work better when combined with twice/week seafood dinners*
- *Seafood Diet Project: finding processed seafood products that have retained the EPA/DHA requirements*

He organized and paid many thousands of dollars for blood tests to check the omega-3/omega-6 balance in a number of family members, friends and

associates. He also paid for their Vital Choice salmon oil capsules. Participants were tested, then advised to take the fish oil capsules with a careful diet, and then retested after several months, to see if their omega-3/omega-6 balance had improved. Dr. Scott Rice, who had a pharmaceutical research background, was interested in the research and spent hours with Ted discussing the findings. Human subjects do not always follow through on careful eating, and some of the results were inconclusive, but Ted felt that the overall results bolstered his theories.

He continued to press about society's need for high quality fish oil supplements to battle a plethora of diseases, from depression to cancer to heart disease to macular degeneration. He worked with the Carteret County Health Department, hoping to include poorer citizens in his mission. Later, on Ted's obituary web site, the head of the health department, Dr. J.T. Garrett, wrote this:

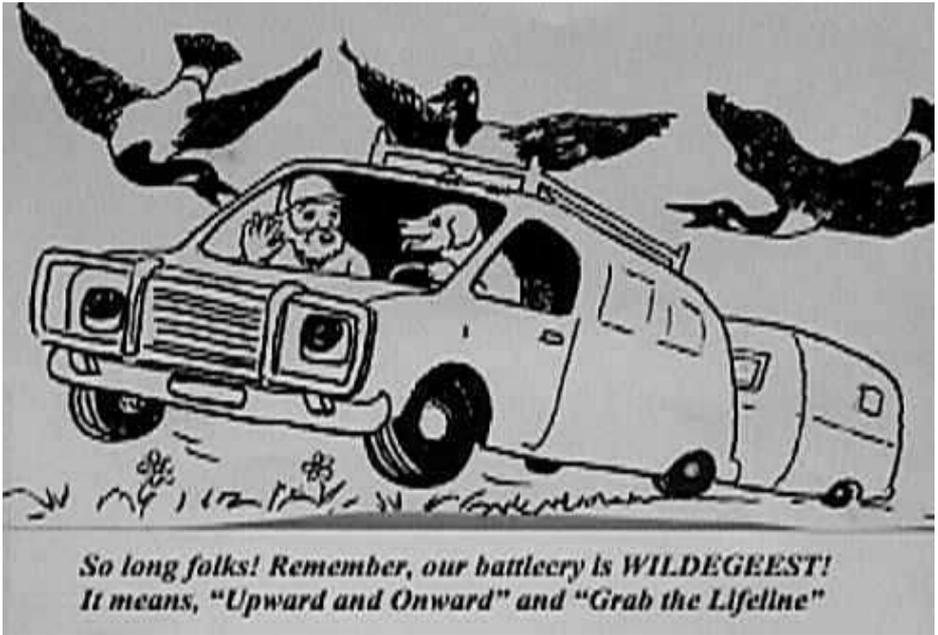
He was a special friend of many of us in public health, related to the fish oil study and his commitment to public health and wellness. His subtle laughter and friendship will be missed, along with the reminders of studies and literature he shared on the health benefits of Omega 3 fish oil and related research.

Ted was a very special man with an understanding and knowledge that was clearly ahead of his time, especially with emphasizing living a productive and active life at all ages in making healthy choices. I like to think of him as being part of the "extended staff" of experts and community leaders that encouraged healthy living and healthy supplemental choices as well.

Though he often complained about how little feedback he received from his lonely endeavors in the decade before his death, Ted never stopped looking for people to involve in his work. In one November 2009 email bulletin, for example, he asked for volunteers for his second human trial:

Wild Alaskan Fish Oil BOOSTER for NC Coastal Seafoods?

Exploratory project, soon to be launched, needs healthy adult participants, non-smokers, prudent diet habits, careful health-motivated lifestyles, mostly, not entirely, persons from coastal Onslow and Carteret County, NC areas.



Participation will not limit normal activities, except to collect two bloodspot samples at home, in special mailing kits, initially and after three months, for Omega-3 Index determinations. During the three month interval, participants will be asked to eat two coastal seafood meals/week (individual choices - finfish or shellfish) supplemented with fish oil...

In other bulletins, he alerted his followers that US military personnel were in poor health: overweight, depressed and in need of nutritional enlightenment. He criticized the food industry's insensitivity to the problems caused by their additives and overly processed products. He also accused the government and top university food scientists of promoting certain products without regard to scientific truths.

In 2010 and 2011, for example, he relentlessly pursued a Harvard researcher conducting a large NIH-sponsored human trial with a fish oil supplement which Ted considered an inferior source of omega-3. Among the documents that he sent were summaries of instructions to his Try-Net project participants (shown here in Ted's creative bulletin style):

Wildegeest “TRY NET PROJECT” Instructions to Participants that produced best results, increased Omega-3 Index in RBC in three months

SUCCESSFUL PARTICIPATION

This project is designed to determine if the inherent benefits of fish oils and seafoods will be improved by combining them together.

This will be tested by having the participants consume 3 gm. wild Alaskan Sockeye Salmon Oil (via capsules, or in sauces) along with an appropriate seafood meal twice a week, 6 grams (Normal dosage of this supplement - 21 grams/week)

WHY NOT JUST EAT FISH TWICE A WEEK?

Most fish are equally beneficial except for the fat content delivered to the consumer, which varies widely because of species, season when caught, and processing method.

The human requirement for essential omega-3 fatty acids of marine origin is year-round. Essentially, by adding this fish oil to the seafood meal you are improving the bioavailability of the fish oil and creating a fatty fish.

WHAT SEAFOOD SHOULD I EAT?

Choose wild saltwater species such as fresh or frozen salmon, herring, mullet, bluefish, halibut, flounder, sea bass, shrimp, crab mussels, oysters, and clams. Limit canned fish to wild Alaskan salmon, mackerel, sardines - packed in water.

WHEN AND HOW SHOULD I TAKE THE FISH OIL SUPPLEMENT?

ESSENTIAL! The fish oil supplement must be taken just before the seafood meal with the protection of a blend of effective natural antioxidant and emulsifier, such as blueberries and plain yogurt. An appetizing alternative is a salad of colorful vegetables and fruits, with a virgin olive oil dressing.

HOW SHOULD THE SEAFOOD MEAL BE PREPARED?

The seafood meal should be hot and ready to eat and enjoy. Its value depends upon how it was cooked. The best way is steaming. For example: Put a fresh or frozen cod fillet in the center of a frying pan and place portions of thinly sliced potatoes, onions with colorful bell peppers, cabbage, tablespoon olive oil, four oz. water, seasoning.

Cover and steam twenty minutes.

WHAT OTHER FOODS SHOULD I EAT, or Especially AVOID?

The performance of fatty fish and/or fish oil depends on the other foods you eat. You need a variety of natural antioxidants and a careful selection and elimination of most animal fats and vegetable oils. Reduce use of manufactured foods and overheated or fried foods.

Ted had continued his travels to Newfoundland, pulling his trailer, until about 2005. Even when he gave up on long-distance driving, he continued to drive to New Bern, Jacksonville, Morehead City, and other places until he became seriously ill in the summer of 2011. Due to deteriorating lung function, he landed in intensive care and then a nursing rehab center for several months. He fervently hoped for and did get another year of life at his home on Earth-Wise Farm, with the help of his family and a very competent home health care aide who indulged his wish to experiment with the cooking of his meals. He endeavored to focus on his farm and his writings during this time. He was in a wheel chair and on oxygen, when he bought a golf cart in order to be able to supervise the work in his fields and gardens, just weeks before his death.

Amongst many correspondences in 2011, here is just one example of what Ted would get up and do each day: He emailed Mary Margaret Chappell, Food Editor, *Vegetarian Times*, warning of the inefficacy of the health supplement Bromelain due to “thermal instability” from processing which may “reduce or remove the benefits for the average consumer.” To the email, he attached an article from the International Food Research Journal (2011).

Struggling to regain strength and independence, Ted continued to work at his computer, sending email bulletins to his list. In April 2012, for example, he sent this one:

**Don't Lose Sight of Fish to Avoid
Age-Related Macular Degeneration and Blindness**

**A Natural, High-Quality Fish Oil to the Rescue!
Your FOUNDATION DIRECTOR
routinely followed Foundation's
FISH OIL THERAPY DIRECTIONS for many years.**

NOW AGE-98.5

**After 2 years between visits - No evidence of Macular Degeneration;
Vision Remains Unchanged, Licensed to Drive Without Farsighted Glasses!
REFERENCE : Research led by Dr. Sheila K. West , PhD is part of
the Salisbury Eye Evaluation (SEE) Study. Dr. West : Our study corroborates
earlier findings that eating omega-3-rich fish and shellfish may protect
against
MACULAR DEGENERATION.**

Another tribute on the obituary web site was from Borden Wallace, son of Ted's initial boss at Wallace Menhaden. He had worked with Ted when he was young and later became the head of Wallace Menhaden.

I first worked with Ted when I was fourteen, washing glassware in the lab in Morehead. I continued to work for him and with him for a good portion of my adolescent and adult life. You may not know that in the Ocean laboratory he pioneered the proper techniques for pasteurization of crabmeat. That summer, I always bragged that I got paid \$1.50 an hour and all the crabmeat I could eat.

I was always treated by Ted with respect, and even as a teenager he treated me as an adult. He was always fair, open minded and highly focused on whatever project was occupying his time. He asked my opinions on the research we were doing, and I think he gave my responses due consideration.

He and I spent many nights in Louisiana over a bottle of his favorite sipping whiskey discussing ways to improve our fish processing. And true to form, when I made an unannounced visit to him last year at Harborview [the nursing rehab center, summer 2011] he was reading about the efficacy of the triglyceride form of omega 3 fatty acids. Such conviction rarely seen!

In my book, he remained the Ted Miller I knew to the end. I am glad he was my boss, my mentor, my employee and most of all my very, very good friend. I will miss him.

In early July 2012, Ted was still at work, emailing back and forth with Randy Hartnell about fish oil orders for sale through Jim Phillips' seafood market and upcoming work plans.

Three days before his death, he spent a few hours with Cyril Lance, whom he had met in 1996 in Newfoundland. Cyril drove several hours from the North Carolina Piedmont to enjoy lunch with Ted at Earth-Wise Farm. Later, after learning of Ted's death, Cyril wrote to a family member that "it really didn't feel like it was going to be a 'last visit' but rather I think we were both excited about the next visit and being back in touch. There was only looking forward with Ted, and he still had a million plans from continuing his research . . . to what he was going to put into his pickling sauce."

Cyril said as he was leaving, Ted gave him a bottle of salmon oil capsules.



Cyril Lance at Ted's home, July 15, 2012 (painting by Sylvia Miller in background).

Appendix: Reports and Correspondence

What follows is a list of important reports and correspondence by Ted from his career as a seafood scientist and other writings from his last 22 years.

1955-1991: Reports/Correspondence/Files from Wallace Menhaden, Marine Chemurgics and Seafood Lab. Themes resonate throughout: how to use healthy fish oils and other fisheries products in human recipes, preserving without oxidation and damage to the product caused by overheating; the use of scientific method; lab experiments; illustrations and recipes, as well as wide-ranging documentation (literature search) and careful writing.

1955-1961 with additional letter in 1991: Correspondence with Dr. Edward “Pete” H. Ahrens Jr., MD, New York’s Rockefeller Institute on how to procure and process high quality menhaden fish oils for human consumption, without oxidation (and odor), with Dr. Ahrens’ letter reporting that his research had been submitted to *The Lancet*, giving Ted credit for his contribution. Publication in *The Lancet*, January 17, 1959, pp. 115-119 (London), describes research on fish oils by Drs. Ahrens, et al and T. M. Miller of Marine Chemurgics. Also: fragile originals and copies of correspondence with Dr. Ahrens and other fish oil specialists in industry and government laboratories referencing work in the US and in Canada, Norway, Scotland. Included are many descriptions of the questions and tests underway toward finding a sound process for refining fish oil for human pharmaceutical and nutritional benefit.

1966-1969: Reports of “Carteret County Seafood Processing Project,” a Marine Chemurgics report written under contract with US Dept. of Commerce’s Economic Development Administration and Carteret County, NC. Written by Ted Miller with eight industry, government, business and university advisors including Dr. Frank B. Thomas of NCSU. 2 copies of first report, and 4 copies each of Part 2 and Part 3.

About 1973: Copies of newspaper stories from Ted’s and others’ work with the NCSU Seafood Lab.

October 1974: “Technical Operations Manual for the Blue Crab Industry,” by Ted Miller, N. B. Webb and Frank Thomas, NC State University Food Science Department, under contract to NC Division of Marine Fisheries, Sea Grant Publication.

December 1975: “Don’t Waste That Fish,” A Sea Grant publication by Dixie R. Berg, Ted Miller and Frank Thomas.

1962, 1965, 1973 and 1978: Carteret County News-Times articles (originals and copies, in one envelope) on Ted’s work, not Seafood Lab but other joint ventures.

1979: Original Grandcook Method Manuscript minus cover page.

1979: Grandcook Method appliance patent application.

May 8, 1981: "Prototype Cookers for Investigating Aqueous Cooking of Dressed or Whole Finfish," by Ted Miller of Wallace Menhaden Products, Inc. and Marine Chemurgics, with three other menhaden company representatives. Report to Gulf and South Atlantic Fisheries Development Foundation, Inc. March 1981 draft copy included. Original copies.

March 1982: Marine Chemurgics report by Ted Miller and Norm Angel, edited by Todd L. Miller, "Conversion of Blue Crab Raw Materials Into Some New and/or Improved Marketable Products," for the Mid-Atlantic Fisheries Developments Foundation, Inc. Original copy.

July 1982: "Structurally Unchanged Fish Lipids for Human Consumption," with Woody Williams, Jr., Norm Angel, and Todd Miller, for the Gulf & South Atlantic Fisheries Development Foundation. Note: Appendix A on "Status and Future Plans for Research on the Effect of Menhaden Oil on Atherosclerosis and Ischemic Heart Disease of Nonhuman Primates, includes correspondence from a professor at Bowman Gray School of Medicine, Wake Forest University.

April 1, 1983: "Menhaden - A Versatile Fish," by Ted Miller, director Marine Chemurgics and Leslie Vorgetts (Deede Miller) Technical Illustrator, for Mid-Atlantic Fisheries Development Foundation. Three copies.

May 1, 1984: "Fatty Fish & Human Nutrition Resource Notebook," by Valerie Gresham of Clemson University, Ted Miller of Marine Chemurgics, W. Borden Wallace of Wallace Menhaden, and Woodie Williams Jr. also of Clemson University, with Drawings and Design by Leslie L. Vorgetts (Deede Miller). This is a large report (original copy in files, with cut and paste), for Gulf and South Atlantic Fisheries Development Foundation, US Dept. of Commerce. Original plus one copy.

April 30, 1985: "Systems Approach for Preserving Menhaden and Underutilized Fish Entering into Human Food Products," a large report by Ted Miller of Marine Chemurgics, co-investigated by Wallace Menhaden Products, Empire Menhaden and the Head of Clemson University's Food Science Department, Woody Williams Jr., with advisors from the National Marine Fisheries. This study was supported in part by Gulf and South Atlantic Fisheries Development Foundation funds. Original copy.

April 30, 1986: "Good for Man and Beast," Ted Miller with Empire Menhaden chemist and Wallace Menhaden head, and Woody Williams Jr. of Clemson, with C. P. Blackwell (Cindy Miller) (research and editing) and Leslie Vorgetts (Deede Miller) (illustrations), for Gulf and South Atlantic Fisheries Development Foundation.

June-December 24, 1986: Interim reports to Thomas J. Murray, director of Gulf & South Atlantic Fisheries Development Foundation of Tampa, FL. (original plus copy)

Envelope marked 1987-1988: Posters/flyers/charts produced by Marine Chemurgics for various projects. For example, March 20, 1987: What's New: Fats From Fresh Fish for adding Omega 3's to Human Foods. Poster by Marine Chemurgics as part of the Fish Puree Project (see below), funded by Gulf and South Atlantic Fisheries Development Foundation. Also "Waste Not Want Not" flyer and poster produced by Marine Chemurgics as part of that same study on March 11, 1988. "A Look at Canned Catfoods," a flyer produced for Wallace Menhaden Products on Feb. 29, 1988. "Products from Underutilized Fish," a Marine Chemurgics report for Gulf and South Atlantic Fisheries Development Foundation, Feb. 12, 1988 (three copies). Miscellaneous other illustrations and charts in file.

April 30, 1987: "Fish Purees....Omega-3's Au Nature!" a large study by Ted Miller/ Marine Chemurgics for the Gulf and Southern Atlantic Fisheries Development Foundation, with other investigators from the menhaden industry and Clemson University's Woody Williams, Jr. with research and editing by C. P. Blackwell (Cindy Miller). Omega-3 in fish and shellfish, "Good for Man or Beast," with home cooking and industry preservation research presented; plus interim reports back to April 30, 1985.

March 1989: "Fresh-Caught Gulf Menhaden for Foods and Feeds," a Marine Chemurgics Research Project for US Marine Fisheries Initiative (MARFIN) under direction of Paul E. Bauersfeld, Southeast Fisheries Center, Charleston Laboratory; investigators Ted Miller, director, and C. P. Blackwell (Cindy Miller), R&E, Marine Chemurgics; and Wallace Menhaden Products, W. B. Wallace; and Empire Menhaden, J. W. Stuart. 3 copies, one bound. Also, "New Ways to Use Gulf Menhaden in Human Foods, Animal Feeds" an executive memo to Thomas Murray, Gulf and South Atlantic Fisheries director, an original copy (cut and pasted).

November 21, 1989: photos as part of report to Paul Bauersfeld of Charleston's Southeast Fisheries laboratory, of fish handling methods, ideas for new products.

December 30, 1989: "Gulf of Mexico Menhaden for Foods and Feeds," a Marine Chemurgics report under supervision of Paul Bauersfeld, SE Fisheries Center, Charleston, SC, and menhaden industry people named above: an interim report as part of "Collection, Preservation, Storage and Shipping of Food Grade Gulf Menhaden for New Project Development." (Note: includes 1985 New England Journal of Medicine article about fish eaters and lower coronary heart disease.)

February 28, 1991: "New Fish Products: Transition From Laboratory to Applied Uses," final report to Gulf & South Atlantic Fisheries Development Foundation, report under project monitor, Malcolm Hale of NMFS ESEFC - Charleston Lab, advisor Paul Bauersfeld of same, and with investigators Ted Miller, Marine Chemurgics; Jim Stuart, Empire Menhaden, W. B. Wallace of Wallace Menhaden, and with consultant Dr. W. P. Williams Jr., Clemson University. Original Copy. Marine Chemurgics, Contractor, report prepared for Gulf and South Atlantic Fisheries Foundation, with matching industry funds. Original plus one bound copy.

March 27, 1991: “Gulf Menhaden Can Make It Better,” a Marine Chemurgics report in the form of Q&A, with instructions and charts on processing food-grade menhaden and food applications/nutrient analyses. Original and two copies.

1998: Single copy of NFLD newspaper article about Ted’s mantra “Don’t Waste a Single Day,” The Western Star, Cornerbrook.

1998: Art Show in Hillsborough file, PR Flyer

1999-2012: Wildegeest Foundation and Earth-Wise Farm materials. Also: two boxes of resource materials in files that Ted made in the last 12 years on a variety of subjects which interested him. They are not organized but are in labeled file folders.

1999-2002: (In separate box) 1999-2001, *Wildegeest! A Search for Last Places*, original manuscript, two versions, in separate box, along with sequel (see below). This is a printed out version of the ebook, found on the web site www.wildegeestfoundation.org. There are also CD versions of the book *Wildegeest! A Search for Last Places Sequel - He Found Newfoundland*, original document plus hard copy published version; contains advice for aging in active, healthy ways including food choices/preparation ways. Also black binder with draft material for the book including numerous photographs.

2004: Treasure, Revolution, and the Mysteries of the Merida,” by Michael Alderson, Steamboat Bill, Summer, 2004, Journal of the Steamship Historical Society of America, No. 250, Vol.61, No. 2. He interviewed Ted about his participation in the 1932-1933 salvage operation.

2004: “Three Centuries” draft document, by Ted Miller, with some family history, some about his thoughts and travels after his wife’s death, and about the birth of the Wildegeest project and Earth-Wise Farm. Document is incomplete. Original.

c. 2000-2007: Wildegeest and Earth-Wise Farm bulletins, photos, emails, including 2004 work plan, 2005 progress report, 2007 “legacy” report and miscellaneous correspondence; 2 copies of Wildegeest Foundation “welcome aboard” document with photos of Earth-Wise Farm operations and news of fish oil therapy project etc. original copy of 2002 letter from Dr. Oliver Sacks.

2008: Bill of Rights for the Aged, and related research.

2006-2007 Fish Oil Therapy Project: Bulletins/descriptions and some accompanying printout materials regarding Ted’s human-test experiments. Participants were asked to take three fish oil capsules daily with antioxidant-rich food like berries or buttermilk. File of correspondence with and about Dr. William Harris’ OmegaMetrix testing program for Omega 3/Omega 6 balance in test subjects, and Ted’s use of it for Carteret County subjects.

c. 2008: “Evidence that Fish Fats are Needed,” Omega 3 and Omega 6, sources in

whole foods and oils, and other research. Document includes explanation of Omega 3s and 6s and how to get the right balance.

2008-2010 - The “TryNet” or “Continued Good Health Project” involved 50 to 60 year olds, non-smoking, who had “prudent diet habits.” TryNet participants gave blood samples before and after three months of consuming 3 Vital Choice Wild Alaskan Sockeye Salmon Oil capsules (1000 mg) twice a week WITH seafood dinner, cooked in healthy way. The reasoning for this project is laid out in an 11/09/08 memo titled “What’s Most Important about the Wildegeest Fish Oil Story?” The US population is deficient, its Omega3/Omega6 balance is off, which increases the likelihood of certain diseases, according to Ted’s memo. The American Heart Association’s assertion that eating seafood twice a week is protective is probably incorrect because much of the seafood that is eaten is lacking in essential nutrients, is cooked improperly and/or is not boosted by antioxidant-rich foods taken in a “synergistic” combination.

2009-2012 Randy Hartnell File: Email correspondence with Randy Hartnell of Vital Choice Seafood, plus attachments. Dec. 2009: Correspondence and reports regarding the TRY-NET Project, which, Ted wrote, was “a later phase of the Fish Oil Therapy Project, started 03.02.07.” He further notes that the dedication to Dr. Pete Ahrens (who died Dec. 15, 2000) still applies. March 30, 2010 Memo, “Synergy Diet Requires Live Ingredients,” asserts that combining fish oil supplements with healthy diet and special antioxidant-rich foods increases the “bioavailability” of fish oils’ nutritional benefits. Email communications with Randy Hartnell regarding project with Clyde Phillips Seafood of Swansboro, a brochure about the benefits of using high quality salmon fish oil; beginning of arrangement to buy in bulk and sell from the seafood market, splitting profits with Jim Phillips. Phillips and the Wildegeest Foundation both benefitted financially from this deal. July 4 2012 emails re future plans.

August 17, 2010: Letter to Dr. JoAnn E. Manson, Harvard: Dr. JoAnn E. Manson, MD, Principal Investigator, Vital Study. Ted raised fervent questions about the viability of the “The Vitamin D and Omega-3 Trial (VITAL),” funded by NIH, conducted by Brigham Young Women’s Hospital and Harvard Medical School. He attached copies of correspondence with Dr. Edward H. Ahrens of Rockefeller University and other fish oil scientists to back up his complaint.

2011: Email with attachment to Mary Margaret Chappell, Food Editor, Vegetarian Times, warning of the inefficacy of the health supplement Bromelain due to “thermal instability” from processing which may “reduce or remove the benefits for the average consumer.” He attached an article about this from the International Food Research Journal (2011). (Put in file)

January 2012: Letter from Dr. Roger Locandro, Rutgers Univ. professor who was a neighbor in Cow Head, NFLD



Ted Miller and 'bestfrienddog' Theo swimming in Bogue Sound, NC