The term ‘thalassemia’ was coined in 1932 by George Hoyt Whipple (1878-1976) of the University of Rochester in Rochester, New York. The term is derived from the Greek words “thalassa” (θάλασσα) meaning “sea” and the suffix -aima (αίμα) or “blood,” denoting the high prevalence of this hematologic disorder in people of Greek, Italian, Cypriot, Turkish, or Sicilian ancestry—all of whom originate around the Mediterranean and Black Seas.

Whipple, who was classically trained at Andover Academy in New England, recalled the story from Xenophon’s Anabasis in which a weary Greek mercenary army returning from battles in Persia crested a mountain and at last gazed upon the Black Sea; the relieved army shouted in unison, “Thalassa, thalassa!”

In 1889, Rudolf Von Jaksch (1855-1947) in Vienna described “anaemia leucaemic infantum,” a form of chronic anemia in young children associated with hepatosplenomegaly, leukocytosis, and pronounced changes in size and shape of the red cells, with varying degrees of anemia. This disorder became known as “von Jaksch anemia” and was later found to include a heterogeneous group of conditions, including anemia of chronic inflammation, anemia of malaria and parasitic infections, anemia associated with malnutrition, and congenital anemias.

Despite the prevalence of von Jaksch’s anemia in Southern Europe, it was an American physician, Thomas Benton Cooley (1871-1945), who first differentiated the unique syndrome that became known as “Cooley's anemia” from the broader mix of disorders included in von Jaksch anemia. Cooley recognized that even among well-nourished Italian and Greek children in Detroit who lived far from areas of malaria prevalence; there was still a disorder that included hepatosplenomegaly, anemia, muddy-yellowish skin discoloration, and a distinctive appearance caused by the enlargement of the cranial and facial bones. He presented a landmark series of “erythroblastic anemia” patients before the American Pediatric Society in 1925 and published this series in 1927. In subsequent correspondence, Cooley referred to this disorder as Mediterranean anemia; later, other authors began to call it Cooley’s anemia, an eponym he disliked.

Cooley was born on June 23, 1871, in Ann Arbor, Michigan. His father, Thomas McIntyre Cooley, had been a chief justice of the Michigan Supreme Court and dean of the University of Michigan Law School. He gave his name to a law school in Michigan and high school in Detroit. Young Thomas Cooley attended Ann Arbor High School and the University of Michigan, from which he received a doctor of medicine degree in 1895.

He trained as an intern at the Boston City Hospital and later returned to Ann Arbor as an instructor in medicine at the University of Michigan from 1898 to 1900. After a brief trip to Germany, he again worked as a resident physician at the Boston City Hospital for a year and undertook specialized training in hygiene and contagious diseases. He then returned to Ann Arbor as an assistant professor of hygiene at the University of Michigan from 1903 to 1905. Along with Victor Vaughn (1851-1929), the director of the Michigan hygienic laboratory, Cooley was able to procure a $2500 grant to provide free anti-rabies treatment for Michigan residents. In his annual report to the Michigan Academy of Science in April 1904, Cooley presented meticulous details about the success of this endeavor, which included vaccination of 38 patients.

In 1905, Cooley left the University of Michigan and began working as a pediatrician in Detroit. There, he was instrumental in developing a multidisciplinary approach to contagious diseases and other pediatric conditions, involving health officers, nurses, social workers, and the public. Collectively, this group was called the “Association for the
Study and Prevention of Infant Mortality.” He also started a “Babies’ Milk Fund” in Detroit to decrease infant mortality due to malnutrition. He was a strong proponent of preventive health, and in a June 1912 address to the American Medical Association at their 63rd annual session at Atlantic City, New Jersey, he stated “the greatest chance to reduce infant mortality has been shown to lie in educating the public, the mothers, and young girls in infant feeding and hygiene. This work is the right and duty of the pediatrician [sic] to direct and it cannot meet with its full measure of success unless under skilled direction.”

With his pediatric experience and leadership skills, he was appointed as the Assistant Chief of the Children’s Bureau of the American Red Cross in France during World War I. While in France, he led several projects, including implementation of a school of public health for children, establishment of a pediatric hospital, development of a boarding school for orphans, and foundation of a training school for visiting housekeepers who were tasked with visiting impoverished children and ensuring proper hygiene and diet. On his return, the Detroit Free Press ran a full-page feature about Cooley’s work in France entitled, “Children Of France Are Forever His Debtor.” The government of France awarded him the Legion of Honor in 1924.

From 1921 to 1941, Cooley was the head of pediatric service at Children’s Hospital of Michigan. He was also a professor of pediatrics at Wayne State University in Detroit from 1936 to 1941. He was known for being austere and aristocratic, and enjoyed solitary pursuits, including fishing, boating, and golf. Michigan pathologist Wolf Zuelzer (1909-1987) noted in 1957, “Though an extremely able clinician and astute observer, [Cooley] was more interested in the theoretical ramifications of the case at hand than in the individual patient. Rounds on Cooley’s service at Children’s Hospital were occasions for brilliant and stimulating dissertations on a few cases selected for the challenge they offered to an analytical mind, or else for a review of urgent decisions which simply could not be put off any longer. The systematic coverage of the service, the detailed instructions of his resident staff failed to interest him.” Cooley received the honorary Doctor of Science degree from the University of Michigan in 1940, and retired in 1941.

Without any formal training in hematology or genetics, Cooley started researching various pediatric hematological disorders in the 1920s. In addition to describing thalassemia, he described congenital sideroblastic anemia in the 1940s, and challenged the notion that sickle cell anemia was a race-restricted disease. He was of the opinion most physicians pay too little attention to medical genetics and emphasized that family histories might be put to better use by medical geneticists than by genealogists.

He was a charter member of the Central States Pediatric Society and of the American Academy of Pediatrics and later served as president of both the American Academy of Pediatrics and the American Pediatric Society.

Cooley died of hypertensive heart disease on October 13, 1945, in Bangor, Maine. His obituary in American Journal of Diseases of the Child referred to his work on thalassemia as ‘one of the outstanding contributions to hematology by an American.’ His seminal 1927 paper on thalassemia also was included in a 2001 collection of 86 ground-breaking 20th century hematology papers.

The importance of thalassemia prevention programs was commemorated philatelically by Cyprus on October 23, 1978 (Michel catalog #492, Scott #504.) This stamp depicts a peripheral blood smear showing the hypochromic microcytic erythrocytes typically seen in patients with the severe forms of thalassemia.