



LEÓN CROIZAT 1894-1982

NEVER A SERIOUS SCIENTIST: THE LIFE OF LEON CROIZAT

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ABSTRACT

A brief biography of Leon Croizat (1894-1982), the biogeographer, botanist and evolutionist is presented. His early life in Italy, the period he spent as an employee of Harvard University and his later years in Venezuela are particularly emphasised.

Keywords: biogeography, botany, Coro, Croizat, evolution, Harvard University, Italy, Venezuela.

Leon Croizat was born in Turin, Northwest Italy on July 16th, 1894 to French parents. His family was an old one in the region bounded by Lyons, Chambery and Geneva, and he included amongst his ancestors Saint Francis of Sales, Madame de Roland (guillotined by Robespierre during the French Revolution) and Lamartine (a famous 19th Century French poet and politician). Leon's father was a prominent Italian industrialist, the first to finance oil drilling in Italy and Rumania, and a pioneer in the electrical and automobile industries. When he was six, and a year after the birth of his twin brothers Eugene and Frederick, his parents separated. As a consequence of their protracted legal battles, and his father's loss of interest in the business, the family was virtually destitute by the time his father died in 1915.

From an early age Croizat enthusiastically studied living nature, in both the wild and under captivity/cultivation. He was privileged to know the wealthy, elderly count Mario Peracca who was an eminent herpetologist. The young Croizat was often a guest of Peracca and spent many hours in his greenhouse through which Galapagos tortoises and giant iguanas roamed freely.

University studies were interrupted by the First World War, during which Croizat served in the Italian Army from 1914 to 1919, attaining the rank of infantry captain. In 1920 he received his law degree from the University of Turin, and commenced work in a textile mill, which a friend owned.

During the war Croizat had married. A son Victor was born in 1919, and was followed by a daughter Georgette in 1921. By this time the oppressive Fascist political movement led by Mussolini was rapidly gaining power in Italy. Naturally Croizat actively opposed Fascism, but in the face of threats was forced to leave Italy. Like many others at this time he chose to emigrate to the United States.

Early in 1923 the Croizat family landed in New York, and thus began long years of hardship and poverty. Croizat was forced to seek menial employment at the lowest possible wages. Seeking refuge from the drudgery of his daily routine, he developed an interest in water colour painting. By 1929 he was achieving some success in this field and exhibited paintings at the Brooklyn Museum of Art, to which he sold one for the then not inconsiderable sum of \$100. The Wall Street Crash of 1929/30 destroyed the American market for contemporary art works, and Croizat decided to further his artistic career in Paris.

Arriving in Paris, Croizat found it impossible to succeed as an artist primarily because of the extremely corrupt nature of the Parisian art

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world. As they had no work permits his wife and he were forced to return to New York. Once again the Croizats faced poverty including "times of actual starving", which only ended when he obtained a position identifying plants assisting a topographical survey of New York parks. At this time he was a frequent visitor to the New York Botanical Gardens, where he became known to the director Dr E. D. Merrill. In 1936, Merrill was appointed Director of the Arnold Arboretum, Harvard University and he offered Croizat a job as technical assistant. Croizat writes of this period in his life:

"I entered my new job in 1937...and began to publish which promptly involved me in difficulties on account of the censorship I was supposed to accept, but I would not recognize. Merrill kept me on, nevertheless, as a consultant on matters of languages (I can freely handle French, Italian, Spanish, Portuguese, Latin, Russian, German and with a dictionary Greek...) and morphology, etc. This left me free of my time, and I readily conceived the project of effecting the broadest possible survey of the international streams of botanical thinking from the days of Caesalpin to the present."

As a result of this reading Croizat accumulated three to four hundred booklets of notes, which later formed a reference base for his books and many of his papers. But he was not only a student of botanical literature. He firmly believed in testing both the writings of others and his own observations in the herbarium, whenever possible, against the study of living plants. An eminent American botanist, who knew Croizat at Harvard, writes of his skills as a botanist thus:

"Croizat was working on the Euphorbiaceae while here and his drawings, dissections, annotations on herbarium sheets are superb...Croizat's notes on the genus *Croton* in our herbarium remain for who ever tackles that difficult group and no one has been willing to do so. He saw types in Europe and made comparisons from memory and several I have checked up on are accurate to an unbelievable degree."

Unfortunately, Merrill was levered from his directorship of the Arboretum in 1946, and Croizat was dismissed only a few months short of tenure. Instrumental in Croizat's dismissal appears to be the fact that he had written a paper on *Trochodendron* and *Tetracentron* that was critical of several studies on the same two genera published by I. W. Bailey, an extremely powerful and influential figure at Harvard. Croizat submitted the paper to the *Journal of the Arnold Arboretum* but Bailey prevented publication. Eventually Croizat's paper appeared in the equally reputable journal *Bulletin of the Torrey Botanical Club*.

Unable to find another post in the United States, Croizat obtained a scientific job in Caracas, Venezuela. From 1947-1952 Croizat held a number of academic positions in Venezuela, and in 1950-1951 was botanist on the Franco-Venezuelan Expedition to the sources of the Orinoco River. At this time he was divorced from his first wife and married his second wife. In 1953 Croizat, encouraged by his new wife, gave up official academic positions to work full time on biological problems.

His first book *Manual of Phytogeography* was written by the time he landed in Venezuela, and this was published by the prestigious Dutch firm, Junk of the Hague. In Croizat's own words the rest of his work "came out of a most unpretentious near-shack of two rooms and a kitchen in the point of Caracas know as *Chaplin a Country Club*, which was home to us from 1953-1975, with two interruptions: in 1959-1960 a fast trip (to) South America..., and in 1962-1963 to Europe...where I spoke in the hall of the Linnaean Society of London and in the Musée d' Histoire Naturelle of Paris".

In 1976, Croizat (aged 82!) and his wife took over as first Directors of the "Jardin Botanico Xerofito" in Coro, a city about 300 miles west of Caracas; a botanical garden which they founded and had worked hard to establish since 1970. Incidentally, the gardens are now to be named after Croizat. This happy occasion was marred by Croizat losing his right eye in February, 1976. Further ill-health followed and culminated in a major abdominal operation in May, 1979. By now old age had taken its toll. The fact that the paper in this volume was written and typed out in August, 1982 by an 88 year old, (blind in one eye and with the use of only one hand), three months before his death, testifies not only to the lucidity of Croizat's thought but also to the vigour with which he fought academic authority and learned ignorance.

Croizat died on November 30, 1982 of a heart attack. I can find no better epitaph than a few lines he wrote me in April, 1982:

"I have indeed lived and worked to my taste either in art or science. What more could a man desire? Knowledge has always been my goal. There is much that I shall leave behind undone...but something at least I was privileged to leave for the world to use, if it so intends....As the Latin poet said I will leave the table of the living like a guest who has eaten his fill. Yes, if I had another life to spend, I certainly would not waste it. But that cannot be, so why complain?"

NOTE ON SOURCES

No published account of Croizat's life has so far appeared, apart from very concise autobiographical notes at the end of Croizat (1982). In his scientific work, Croizat made occasional allusions to incidents in his life. For instance, readers familiar with Volume 1b of *Principia Botanica* (p.p. 1299-1300) will already be aware of Croizat's opposition to Fascism. The chief source upon which I have based this account is a series of letters, concerning his life, that Croizat wrote at my request in March and April, 1982. I have supplemented these detailed accounts with material (personal correspondence and a tape interview with Croizat) generously supplied by Gareth Nelson, American Museum of Natural History. Michael Heads was kind enough to supply a copy of a letter from R. A. Howard (Professor of Dendrology, The Arnold Arboretum of Harvard University) that contained vital details about Croizat's career as a botanist at Harvard. Special thanks are due to Mrs Catalina Croizat for her assistance.