Frank Lewis Marsh: His Life and His Legacy*

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Abstract

In early decades of the twentieth century, history was awaiting a new champion in the creationist movement. The call was answered by a hard- working farm boy with a penchant toward science. He obtained a good education and assumed leadership in the creation movement, becoming a science professor, prolific writer and speaker. He recommended the term *baramin* for the created kind and persistently promoted the concept of discontinuity as contrasted with evolutionary continuity. His scholarship was important inside and outside scientific communities.

Early Years

Frank Marsh was born 18 October 1899 in Aledo which is located on the high prairie of northwestern Illinois. He was the youngest of three children born to Wilson V. and Annabel K. Marsh. They lived on a stock and grain farm where they were familiar with hard work and cooperative efforts. Frank was at home with plants and animals (Figure 1). He did a little hunting and trapping. He even raised skunks for three years in order to obtain pelts. However, Frank's daughter, Sylvia, has informed me that Frank was very softhearted toward animals and that he released alive all of the skunks. He loved to collect butterflies and moths. Even as a youngster captivated by the study of various plants, birds and other animals, he longed for the day when he could become a game warden and write nature stories.

The whole Marsh family was active in their local Seventh-Day Adventist (SDA) church and school. Frank attended SDA schools and was accepted at the SDA medical college in Loma Linda, California.

However, because of financial needs he went into medical work and nurses' training, and in 1925 became a registered nurse in the state of Illinois (Figure 2). He married Alice Garrett 22 June 1927, and that same spring graduated from SDA Emmanuel Missionary College (EMC) in Berrien Springs, Michigan. He received a B.A. degree in science and English.

After a year working as a nurse he returned to EMC for what was his first year in a career of teaching. He instructed in physics at the EMC academy, and concurrently earned

Figure 1. Frank Marsh is 6 years old and in first grade. Find him at lower right by the sheep.

30 more hours of college credits in science and Bible at EMC for which he received a B.S. degree in the spring of 1929. During that spring Frank also was editor of the college newspaper and associate editor of the college annual, The Cardinal. Throughout this time his writing and teaching skills were being developed.

Figure 2. Frank Marsh in 1925 at graduation from nursing school.

For the next five years Frank taught science and math courses and also served as Dean of Men at

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Figure 3. Frank Marsh in his office at Union College, 1948.

Hinsdale Academy in Hinsdale, Illinois. Frank recognized his need for more formal training, but most of his denominational leaders frowned upon attendance at non-SDA universities. There were other denominational leaders, however, who did encourage him, and so while continuing at Hinsdale he took courses in chemistry, genetics and field zoology at the nearby University of Chicago in night classes and private meetings with professors.

On his own time and expense he researched local cecropia moths and also their parasites. Because he desired an advisor for a more formal study of the moths, he transferred to Northwestern University's Evanston Illinois campus where he also continued studying additional zoology and botany. During 1934–1935 Frank was supported full-time by the University as he taught there and did research. In the spring of 1935 Northwestern awarded him an M.S. in zoology (see Marsh, 1987). Frank now was prepared to launch into what arguably could be considered the most influential period of his life.

In August 1935 he assumed chairmanship of the biology department of Union College in Lincoln Nebraska where he served for 15 years (Figure 3). He also carried out further graduate studies in ecology, and in 1940 received a

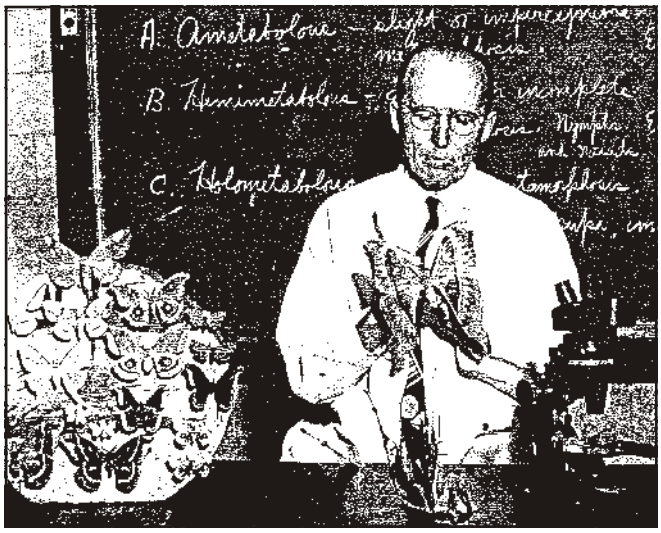

Figure 4. Marsh lecturing on insects especially his lepidopteran moths.

Ph.D. in plant ecology from the University of Nebraska. While living in Nebraska the Marshes had a son, J. Kendall, and daughter, Sylvia.

After completing his graduate studies Frank was constrained to turn from serious empirical research which he loved deeply, and to employ his abilities to forward a cause that was burning in his heart—that of creation.

During his graduate training Frank had sat under an uncounted number of professors in three universities where students were drenched with evolution and creation was derided. So now he, as the first SDA biologist with a Ph.D., was in a position to present to his own denomination and to the world a coherent creationist concept consistent with fields of science and of the Bible. His lifelong experiences of 41 years had included extensive informal and formal training in both of these fields. So he continued with teaching (Figure 4) and other responsibilities while launching into an aggressive career of writing.

His Publications

A. Early works

Frank's published articles first appeared in 1923 with a story about a pet blue jay. During the next decade he had printed 7 short pieces, some of which dealt with scientific topics. These were followed by 8 primarily technical publications. One of these reported a previously unknown parasite which Marsh had discovered.

B. Marsh's First Book

This book, entitled *Fundamental Biology*, (1941) was comprised of 128 mimeographed pages, and the work was

dedicated "to my mother...the guiding star of my aspirations." Seventh-day Adventists were the specific focus of the text, but author Marsh indicated that his reflections should be of worth for those who honestly and sincerely were concerned about creation and evolution.

Marsh's understanding was that God had created life during 6 literal 24-hour days during a 7-day week about 6,000 years ago. The creation included kinds of plants and animals which would reproduce only within boundaries set by members of their types or kinds. Marsh's typological concept of separate kinds was to become a theme that he would elaborate in 50 subsequent years of formal teaching, speaking and writing. The fertility which would permit offspring was a touchstone for assigning a male and a female to a single kind. He referred to this concept as a biological law of creation (the law of reproduction, p.93, or a universal law in nature, p.105) as being just as real as the law of universal gravitation (p.52).

Being a professional biologist Marsh recognized the importance of gene and chromosome changes, hybridization, genetics (segregation, recombination, etc.), natural selection, niches, adaptions, and extinctions. He believed that rather than evolutionary progress there had been degeneration (including behavior contrary to original instincts) since the time of creation.

In this first book Frank Marsh (1941, p.100) revealed his wrestling with what to name the groups which God originally had created. He desired to dissociate the types from the word "species." Possibilities were "Genesis kind," "Original kind,"or "Created kind." But he concluded that a new word was needed, saying:

> What could be more appropriate than to build this word from the two Hebrew words "bara" (created) and "min" (kind)? This would give us the single word "baramin" (pronounced ba rä-min) for one Genesis Kind and "baramins" for more than one kind (p.100).

Marsh's first book apparently has had little influence except possibly within the SDA denomination, but Marsh's pattern of thinking had been solidified and he was on the way toward publication of the next book which would have a major influence not only within his denomination but also upon others having a variety of religious views.

C. Second Book

The next book, *Evolution Creation and Science* (*ECS*), 1944 and revised version 1947,is what I personally would consider Marsh's most significant book. This text and his subsequent major works emphasized scientific content with some Bible references. *ECS* opened with the following impressive inscription.

> This book is dedicated to those who, in their search for truth, ignore unjustified authority in the field of science and keep their sincere minds alert to the recognition of facts regardless of where these may lead in the matter of conclusions.

In the *ECS* Marsh exhibited a credible familiarity with thinking of leading evolutionists as well as scientific data pertinent in origins discussions. With convincing rigor built upon a wealth of factual information he established his case for discontinuity in nature as contrasted with an evolutionary continuum.

Recently I had a personal letter from Dr. Ariel Roth (2001) who currently is Professor of Biology and member of the Geoscience Research Institute at Loma Linda University in California. At the mid-twentieth century when Roth was a graduate student in the Zoology Department at the University of Michigan "evolution was being offered as the only valid worldview" in what otherwise was "a substantial and excellent academic environment." Then Roth read *ECS*, and in his letter to me said, "I had not penetrated very far into the book before I realized how weak the case for evolution was." Frank Marsh's *ECS* had helped Ariel Roth so much that Roth was inspired to write his own origins book to help students as he had been helped by Marsh (Roth, 1998).

Marsh's *ECS* was mailed to one of the world's leading evolutionists and famous geneticist, Theodosius Dobzhansky, who carried on a relatively intense correspondence with Marsh during 1944–1945. In his review "for the American Naturalist, Dobzhansky announced that Marsh had written what he (Dobzhansky) had previously thought to be impossible: a sensibly argued defense of special creation" (Numbers, 1995, p.xvii).

When I was in graduate school at the University of Massachusetts in 1954 I gave a copy of *ECS* to one of my professors who had very adamant evolution beliefs. I recall very clearly his reaction of amazement at the high level and convincing nature of Marsh's scientific material.

D. Other writings

In his writings Marsh steadfastly promoted the concept of discontinuity.

> A point which we are very sure of is that, equal with the fact of diversity, is that of discontinuity. Organisms cannot be found grading gradually one into the other. We recognize men, apes, dogs, horses, oak trees, wheat and roses. There is never any confusion in the minds of taxonomists whether a primate is a man or a chimpanzee, or whether a rodent is a squirrel or a prairie dog (Marsh, 1947, p.101; first edition, 1944, pp.90–91; see also 1973, 1991).

Marsh said that taxonomists were able to erect their phylums, classes, etc. with ease because of discontinuity. In his last creationist book (1976), he said discontinuity "dooms the evolutionist's tree of life" (p.115) and discontinuity "in living and fossil nature constitutes the greatest

single roadblock on the highway to organic evolution" (p.121).

Discontinuities separated the kinds (basic types), and fixity existed at the level of the kind (1960, 1964,1968). Microevolution could occur "within any basic type," but megaevolution (also called macroevolution)—change from one kind to another—was not supported by the Bible or by scientific data. Marsh said, "The production of like by like is a natural law of biology"(1969, p.21). Also he believed in creation with the appearance of age (1978).

The means of determining what organisms belonged to a kind involved simple fertility between two organisms. In the case of the mule which is a horse-ass hybrid and sometimes sterile, Marsh was not sure in 1941 whether the horse and ass belonged to one or two kinds (1941, p.56). However, by 1944 Marsh believed that the mule was evidence that the horse and ass were members of one kind—the horsekind (*ECS*, 1944, p.149; 1947, p.185). Other similar evidence was the tiglon (tiger-lion hybrid) and the cattalo (cow-bison hybrid), each of these representing a single kind (*ECS*, 1944, p.150; 1947, p.186).

For Marsh two forms could hybridize because of their physiological (chemical) likenesses. Even if forms are morphologically distinct, they could be members of the same kind if their basic chemical similarities permitted union of their germ cells (*ECS*, 1947, p.175). In 1957 Marsh sharpened this general idea by suggesting that this union of germ cells had to be true fertilization in which "both reduced parental sets of chromosomes join and participate in the first division of the fertilized egg" (Marsh, 1964, p.36). This would result in the formation of the first two blastomeres of the embryo (see Marsh, 1967, p.139). Marsh even recommended "artificial pollination and artificial insemination...as the best tools for the discovery of the limits of the baramins" (Marsh, 1960, p.8; 1964, p.37). Fertilization could occur in nature or in a laboratory test tube.

If true fertilization fails, then morphology may be used to determine membership in a kind because the form of the organism is based upon its chemical makeup (DNA). For example, complete sterility exists between two forms of Drosophila fruit flies which have identical external characters. So the two may be considered members of one baramin. When "individuals are produced by such asexual processes as simple fission, budding, formation of spores, and even by the sexual process of hermaphroditism" they still could be reproducing consistent with the law of reproducing "after their kinds" (Marsh, 1960, p.11; 1964, p.37).

Marsh continually referred to his recommendations for use of the word baramin for the types in nature. For example see 1944, 1947, 1950, 1960, 1964, 1967, 1976, 1979, 1991. In addition to being in the publications of Marsh, the name "baramin" has been used intermittently by others since 1941. Popularity of the expression has increased since Kurt Wise's 1990 paper in which he introduced a taxonomic procedure called "baraminology." Wise's presentation occurred at the same meeting in which Walter ReMine formally presented "discontinuity systematics" (ReMine, 1990). For a survey of literature in this field see Frair, 2000.

Figure 5. Marsh collecting fossil fish and insects in the Green-River-Shale formation 13 miles west of Kemerer, Wyoming, 1959.

Until near the end of his life of almost 93 years Marsh continued to write and publish. His works included 16 different books, well over 100 articles for denominational periodicals, over three dozen in non-SDA organs, and many dozens of unpublished works most of which are to be found in the Adventist Heritage Center at Andrews University in Michigan. Interestingly Frank's publishers of English editions of his books (excluding foreign translations) between 1941 and 1980 totaled 264,416 copies for a total of 29,942,929 pages of creationist literature. The foreign publications totaled over three million pages.

Other Activities and Personal Contacts

In 1950 Frank returned to his alma mater EMC in Berrien Springs, Michigan. He accepted an appointment as Professor of Biology and department chair. Frank and his wife Alice worked on plans for a new life sciences building which later was named Marsh Hall. In 1960 EMC became Andrews University. While at EMC and Andrews Frank gave lectures in the US and many foreign countries.

In 1958 Frank helped launch the "Geoscience Research Institute" on the Andrews University campus. For the research activities of this Institute, Frank expanded his own understanding and abilities in geology by auditing 18 earth science courses at Michigan State University (Figure 5). In 1964 Frank left the Institute which later was moved to Loma Linda in California. Frank continued teaching at

Figure 6. George McCready Price on left and Marsh on right in 1960. Price is 90 years old and Marsh 61.

Andrews including the seminary, officially retiring in 1971 after teaching a total of 43 years.

During 1928–1929 at EMC Marsh had been a student of an SDA scientific leader and flood geologist named George McCready Price, with whom Marsh stayed in contact until Price's death (at almost 93 years of age) in January 1963. Friendship between these two men had deepened over the years (Figure 6). Price came to appreciate the writing of Marsh, and told him, "When I retire from the battle my mantle shall fall upon you." (Numbers, 1995, p.xvi). It is clear that Price had a major influence upon the religious and scientific views of Marsh.

Frank Marsh was a member of the 1963 organizing group of the Creation Research Society (CRS) (see Armstrong, 1976; Williams, 1992) and remained on the Board from 1963–1969, holding the position of vice-president in 1966. He published 16 items in the Quarterly which was the greatest number he had printed anywhere outside his primarily denominational literature. He was elevated to the status of fellow of the CRS in 1976, and the

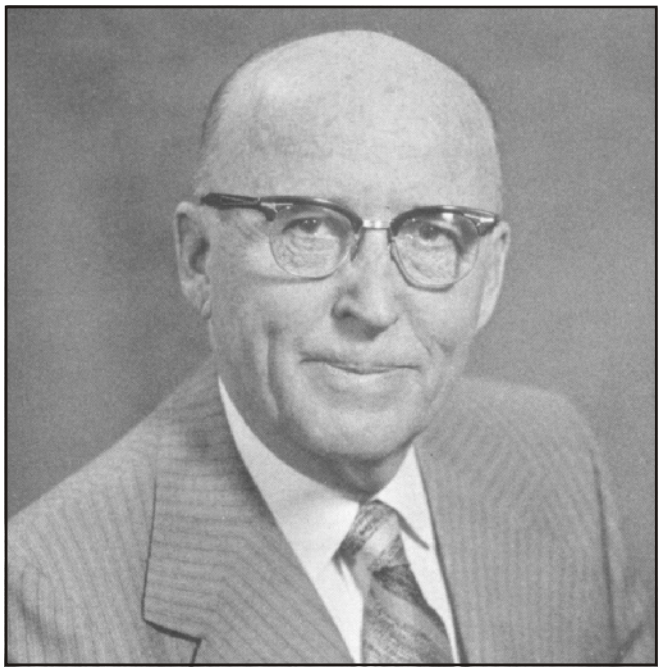

Figure 7. Marsh in 1976 when he became a fellow of the CRS, and the Annual Issue of *CRSQ* was dedicated to him in June of that year.

Quarterly for that year was dedicated to him (Armstrong, 1976). See Figure 7.

Henry M. Morris was another scientist who was working on the early CRS Board with Frank Marsh. I asked Henry about the impact of Frank Marsh's life and writings, and Morris replied that he believed he had read all of Marsh's books, appreciated him and had profited very much from the books. Morris characterized Marsh as "certainly a real pioneer in the modern creation cause" (Morris, 2001).

Frank Marsh's Influence on My Life

My undergraduate college years in the late 1940's and into the 1950's was a crucial period when I was struggling to solidify my views regarding origins issues. During the 1951–1952 year I read Frank's *ECS* book which had a major influence on my thinking. I was impressed by the mass of scientific data and profound scholarship of the author. Never since I studied that publication in the 1950's have I doubted a discontinuity model.

My recognition of discontinuity was reinforced during the early-mid 1950's when I discovered that the advisor for my master's degree in embryology had made a 180 degree turn from being a vigorous promoter of embryological recapitulation. He became an even more ardent anti-evolutionist with regard to embryology (Frair, 1999).

After I had chosen a discontinuity model, I had an opportunity to deliver my first formal presentation before a

learned audience which was a joint meeting of the American Scientific Affiliation (ASA) and the Evangelical Theological Society (see Frair, 1958). The impetus for this paper and its publication came mainly from Frank Marsh's *ECS* book.

In 1958 I was Program Chairman for the Thirteenth Annual ASA Convention at the University of Iowa in Ames, and I invited Frank to be on the program. His presentation was well-received by the attendees. Later the ASA published his document (Marsh, 1960). The work was modified and expanded for the first issue of the *Creation Research Society Quarterly* (Marsh, 1964).

Frank and I carried on correspondence over the years. I was there at the 1963 ASA Convention at Asbury College (Kentucky) where Frank read a paper written by Henry Morris who was not able to attend because of a schedule conflict. Privately a group of us met to discuss the possibility of a new creationist alliance which later was organized as the Creation Research Society.

Not long after Marsh had his booklet *Evolution or Special, Creation?* published in 1963, he and I were discussing the pressures of an academic life, and I empathized as he was telling me how he had to sandwich his writing in between a host of other commitments.

In 1967 the book on the case for creation authored by myself and Percival William Davis was published, and it has had two subsequent revisions (see Frair & Davis, 1983). The book was inspired by writings of Frank Marsh.

Conclusion

It is interesting that in the saga of modern origins studies God has used an array of actors including scientists in a multitude of fields and of philosophical persuasion including atheists and theologians. From humble beginnings a farm boy named Frank Lewis Marsh was virtually a loner back in early decades of the twentieth century. He studied well the works of leading evolutionists and showed how their data fit better into a discontinuity context. By so doing he laid a foundation upon which an increasing number of scientists have been constructing their taxonomies (see Frair, 2000). He died 14 July 1992, three months short of his ninety-third birthday.

Another scientist, Ariel Roth (referred to previously), who like myself experienced a reorganization of his thinking after the reading of Marsh's *Evolution, Creation, and Science*, recently commented on the Scripture verse in Ecclesiastes 11:1 in reference to Marsh's life and work. The verse says—"Cast your bread upon the waters"—in other words, "give generously",—"for after many days you will find it again"—in other words, "your gifts will return".

Roth, in tribute to Marsh's comprehensive contribution to the subject of origins, said, "Frank Marsh did not live long enough to realize how much bread he had cast" (Roth, 2001).

The legacy of Frank Lewis Marsh is being realized to an increasing degree even now as we consider the challenges and opportunities of 21st century science.

Acknowledgments

Considerable aid in locating information along with encouragement was given by Warren L. Johns. Frank Marsh's daughter, Sylvia Marsh Fagal, provided a bibliography of her father's writings along with photographs and personal information about her father and his wife, Alice. Ariel Roth volunteered pertinent personal information about Frank Marsh. Linda Skinner was especially helpful in sending material from Union College in Nebraska. Jim Ford and Wolfgang P. Kunze at Andrews University in Michigan cooperated in my locating resources from their library. Much information in this manuscript was obtained from unpublished material obtained from the above. Other aid and encouragement were given by Donald W. Munro, Robert Brown, Andrew Hui and my wife, Betty Frair. A personal invitation from Todd Wood initiated this project for the year 2001 which stands as the 60th anniversary of Frank Marsh's first book and introduction of the word "baramin" for the discontinuous forms of life.

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Book Review

Christian Men of Science by George Mulfinger and Julia Orozco
Ambassador Emerald International, Greenville, SC. 2001, 321 pages, $15

This book is a compilation of notes from the late George Mulfinger (1932–1987). George was a musician, physicist, chemist and writer. He served on the CRS board during 1975–1987 and his memory was honored with Fellow status in 1988. His legacy includes eleven children who are musicians, missionaries and professionals. Daughter Julia completed this book from dad's files; son Mark did the artwork. The book is dedicated to their mom.

The book offers detailed biographies of eleven creationists, both historical and contemporary. They include Johann Kepler, Robert Boyle, David Brewster, Michael Faraday, Samuel Morse, Matthew Maury, William Thompson, James Clerk Maxwell, Howard Kelly, Henry Morris, and Walt Brown. Each man gets 20–30 pages of discussion. Special attention is given to the spiritual journeys of these scientists. There are many good quotes and anecdotes that are documented in older, less-familiar references. George obviously did in-depth research on the personalities.

The three modern names bring balance to the book. Howard Kelly (1858–1943) was a physician who pioneered lifesaving techniques in gynecology. He taught generations of medical students at Johns Hopkins Medical School. Background information is given on Henry Morris, *father* of the modern creation movement. His career includes engineering, university administration, Gideon ministry and writing. In fact Henry Morris has averaged a new, successful book each year over a 50-year span. He served on the CRS board during 1963–1982, was president for six years, and became a Fellow in 1983.

Walt Brown has a distinguished military and engineering career. He attended West Point, served in Viet Nam as a Colonel, then taught at the Air Force Academy. Surprisingly, the book also discusses quarrels that Brown has with other creationists concerning the priority of published ideas. The book sides with Brown. In fact his picture is placed on the cover alongside Kepler, Faraday and Morse. The book has a helpful bibliography but no index.

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