

AN ABSTRACT OF THE THESIS OF

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The resurgence of creationism in the past few years has been led by advocates of recent-creationism. These individuals, a minority among creationists in general, argue that the entire universe was created approximately 10,000 years ago in one six-day period of time. Recent-creationists support their position by appealing to the Genesis account of creation and scientific data. Their interpretation of Genesis is based on the doctrines of conservative, evangelical Christianity. Their interpretation of scientific data is informed by their theological presuppositions. The scientific side of recent-creationism is supported by several organizations, most of which had their origin in one group, the Creation Research Society. The CRS is a major factor in the rise of the modern creationist movement. Founded in 1963, this small (c. 2000 members) group claims to be a bona-fide scientific society engaged in valid scientific research conducted from a recent-creationist perspective. These claims are analyzed and evaluated.

The Society's history is discussed, including antecedent creationist groups. Most of the group's founders were members of the American Scientific Affiliation, and their rejection of changes within the ASA was a significant motivating factor in founding the CRS. The organization, functioning, and finances of the Society are detailed with special emphasis on the group's struggles for independence and credibility.

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The Creation Research Society's journal, the **Creation Research Society Quarterly**, is analyzed with special emphasis on how its writers support recent-creationism from scientific data. The Society also publishes a number of creationist books, and these are discussed. Special attention was given to the group's most ambitious project, a high school biology textbook designed for use in public schools.

Research efforts of the CRS are evaluated to determine if the Society does "do science." Some of their work has scientific value, but a significant portion of it is trivial in nature. In some cases the CRS does do science in that they seek to test hypotheses from an honest evaluation of observational evidence. However, they operate independent of the traditional scientific community which ignores their efforts.

HISTORY AND ANALYSIS OF THE CREATION RESEARCH SOCIETY

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HISTORY AND ANALYSIS OF THE CREATION RESEARCH SOCIETY

Introduction

The scientific part of the fundamentalist-modernist controversy seemingly ended in July, 1925, when Judge John T. Raulston gavelled the now-famous case of *The State of Tennessee vs. John T. Scopes* to a close. Creationism had won the battle, but it lost the war. Biology teacher Scopes was found guilty of teaching evolution, but the fundamentalist anti-evolution crusade had been made the laughing-stock of American intelligencia. Most of the scientific community turned their backs on Dayton and creationism, convinced that defense attorney Clarence Darrow had shown that the concept of evolution was valid as a scientific and an intellectual concept. But the acceptance of evolution by the public was still not a foregone conclusion, for many still held to a Biblically-oriented creationism.

In the last two decades history seemed to repeat itself as creationism re-emerged as a significant force in America. The increased activity of creationists and their successes in promoting their cause was obvious to all who read their daily papers. Text-book controversies in California, trials in Arkansas and Louisiana, and the establishment of new institutions devoted to advancing the creationist cause demonstrate the vitality of the movement and the degree of popular support it enjoyed.¹

¹Edward Larson, **Trial and Error: The American Controversy Over Creation and Evolution** (New York: Oxford University Press, 1985) discusses the recent legal actions. Dorothy Nelkin, **The Creation Controversy: Science or Scripture in the High Schools** (New York: W. W. Norton and Company, 1982) deals with the recent text-book issues. The Institute for Creation Research in El Cajon, California and the Creation-Science Research Center in San Diego are the two most familiar of creationist insti-

Aggressiveness, sophistication, and diversity characterize this resurgent creationism while unity of organization and leadership are remarkably absent. Compared to the fundamentalist anti-evolution crusade of the 1920's with the charismatic William Jennings Bryan in the lead, the creationist movement seems too unorganized to accomplish anything. No single leader has emerged to give direction to the cause, nor have creationists agreed on their goals, or even accepted a single definition of creationism. Yet there is enough coherence among creationists to identify creationism as a "movement" in sociological terms.²

The modern creationist movement, however, is not unified, for it has both a moderate and a conservative wing. Moderate creationism accepts God as the Creator, but takes no stand regarding the means and date of creation. Moderate creationists have no political agenda for introducing their view into public education, nor do they seek public confrontation with evolutionists. The conservative part of this movement consists of recent-creationists who base their position on a literal interpretation of the Genesis account of creation. They argue that God created the universe in six 24-hour days approximately 10,000 years ago, then reworked the surface of the early earth with the world-wide Noahican Deluge. This group follows an agenda of confrontation, debate, and legal action to include this variety of creationism in public education.

tutes that have been founded in the last twenty years. In 1982 **The New York Times** reported the results of a survey which concluded that: "44 percent, nearly a quarter of whom were college graduates, said they accepted the statement that 'God created man pretty much in his present form at one time within the last 10,000 years.'" Only nine percent agreed with the statement, "Man has developed over millions of years from less advanced forms of life. God had no part in this process." Richard Severo, "Poll Finds Americans Split on Creation Idea," **The New York Times**, Section B, p. 22, August 29, 1982. The recent rise of creationism is also documented by Conrad Hyers, "The Fall and Rise of Creationism," **Christian Century** 102 (April 24, 1985) 411-415.

²Vernon Bates, "Christian Fundamentalism and the Theory of Evolution in Public School Education: A Study of the Creation Science Movement" (Doctoral dissertation, University of California at Davis, 1976), pp. 79ff., describes creationism as a sociological "movement."

In the last two decades recent-creationists have achieved significant results. In 1969 they gained enough political power to force the State of California to change its textbook standards so that biology texts would emphasize the hypothetical nature of evolution and allow for a recent-creationist explanation of origins.³ Further, legal challenges to the teaching of evolution as the only theory of origins reached the Arizona and Louisiana State Supreme Courts. The Louisiana case was heard by the Federal Supreme Court which ruled against the state's law requiring equal time for creationism in the classroom.⁴ Recent creationists have challenged the conclusions of modern geology regarding the age of the earth on a scientific, rather than religious basis.⁵ Creationists have even debated evolutionists on major college and university campuses, frequently claiming success.⁶

There are a number of factors which have contributed to the movement's resurgence. One of these is the existence of long-lived, effective creationist organizations. Within these groups recent-creationists have found mutual reinforcement and encouragement. Some times these groups have catalyzed the formation of others,

³Dorothy Nelkin describes the California textbook situation in **The Creation Controversy** (n. 1), pp. 107-120.

⁴For details on the Arkansas trial see Langdon Gilkey, **Creationism on Trial: Evolution and God at Little Rock** (Minneapolis: Weston Press, Inc., 1985). A good summary of the Louisiana trial is "Science 7, Creationism 2," **Scientific American** 257 (August, 1987) 14. Also see "High Court: the day God and Darwin collided," **US News and World Report** 102 (June 29, 1987). Steven J. Gould published an excellent evaluation of Justice Antonin Scalia's dissent in "This View of Life," **Natural History** 96 (October, 1987) 14-21.

⁵An example of such an argument based on scientific observations is Thomas G. Barnes, **The Origin and Destiny of the Earth's Magnetic Field** (San Diego: The Institute for Creation Research, 1973).

⁶"Morris Debates Leading Anti-Creationist," **Acts & Facts** 12 (January, 1983) 1-2. **Acts & Facts** is the newsletter of the Institute of Creation Research, a small, recent-creationist organization located in San Diego which engages in research and education from this viewpoint. Morris is currently President of the ICR.

sometimes in peaceful expansion, sometimes with harsh acrimony.⁷ But whatever their genesis, these creation-oriented groups have provided an organizational focus for the modern creationist movement.⁸

One of the the most important of the recent-creationist organization is the Creation Research Society (CRS). Founded in 1963 by a group of ten men, it is still a small group, dedicated to one of the most extreme creationist positions: direct creation of the universe within a period of six solar days approximately 10,000 years ago, and the complete re-working of that early earth by the universal Noahican deluge.

While the CRS offers no official encouragement to any legal or political creationist efforts, its members have provided support for many creationist causes, especially with testimony before courts and school boards.⁹ The Society, however, limits its official efforts to research and publishing. They produced the first creationist-oriented biology text designed for use in public schools today.¹⁰ Through its publications, especially its journal, the **Creation Research Society Quarterly**, the CRS has provided most of the modern creationist movement's technical support. Its members have helped establish other, more visible creationist organizations and have become vocal proponents of recent-creationism. The CRS is arguably the most important group within the recent-creationist movement, for without it, this movement would not have had the impact that it has had. This thesis presents a detailed history of this

⁷For a discussion of both expansion and schism see below, pp. 54-57, and Henry Morris, **History of Modern Creationism** (San Diego: Master Books, Inc., 1984), pp. 231-272.

⁸Vernon Bates, "Christian Fundamentalism," (n. 2), pp. 79.

⁹For example, Walter Lammerts, a founder and the first President of the CRS explained his involvement with these hearing in "The Creationist Movement in the United States: A Personal Account," **Journal of Christian Reconstruction** 1 (Summer, 1974) 59-60.

¹⁰John N. Moore, editor, **Biology: A Search for Order in Complexity** (Grand Rapids: Zondervan Publishing House, 1970).

group and an analysis of its accomplishments with respect to both the creationist community and the larger scientific community.

Chapter 1

THE ORIGIN OF THE CREATION RESEARCH SOCIETY

The Society's Theological Foundation

The Creation Research Society (CRS) was organized in 1963 as the only self-proclaimed scientific society in the United States committed to a strict creationist philosophy of science. The Society requires its voting members to hold advanced academic degrees in the natural sciences. Unlike traditional scientific societies, however, the CRS also requires its members to accept a creationist view of origins.¹ But the CRS is more than just an organization dedicated to creationism in general. It supports a specific type of creationism, one that is based upon a particular theological foundation. The Society's positional statement affirms the reality of the creation week, the separate creation of basic kinds of life, the historicity of the Noachian Deluge, and the necessity of accepting Jesus Christ as personal saviour to avoid the penalty for sin. The CRS has positioned itself as an evangelical Christian creationist

¹The full text of the "Statement of Belief" is "(1) The Bible is the written Word of God, and because it is inspired throughout, all its assertions are historically and scientifically true in all the original autographs. To the student of nature this means that the account of origins in Genesis is a factual presentation of simple historical truths. (2) All basic types of living things, including man, were made by direct creative acts of God during the Creation Week described in Genesis. Whatever biological changes have occurred since Creation Week have accomplished only changes within the original created kinds. (3) The great Flood described in Genesis, commonly referred to as the Noachian Flood, was an historic event worldwide in its extent and effect. (4) We are an organization of Christian men of science who accept Jesus Christ as our Lord and Saviour. The account of the special creation of Adam and Eve as one man and woman and their subsequent fall into sin is the basis for our belief in the necessity of a Saviour for all mankind. Therefore, salvation can come only through accepting Jesus Christ as our Saviour." "Statement of Belief," **Creation Research Society Quarterly (CRSQ)** 21 (March, 1985) 215.

organization. Furthermore, their acceptance of a twenty-four hour interpretation of the Genesis "days" and their dating of creation within the last 10,000 years, on Biblical as well as scientific grounds, identifies them as a recent-creationist group.² This religious commitment provides a framework for their interpretation of scientific data and sets them apart from any other scientific group. It was also the avenue through which most of the Society's founders came to their creationism.

Walter Lammerts, who led the group which founded the CRS, credits "a fine Wisconsin Synod Lutheran minister" for pointing him to creationism when Lammerts was thirteen.³ As a result he entered the University of California at Berkeley a committed Christian and creationist. While working in the university library he came across the most complete presentation of flood geology that had been published to that time: **The New Geology** by George M. Price.⁴ In this book Price marshalled arguments for a recent creation in seven 24-hour days and the geological effects of the world-wide Noahican Deluge. This book confirmed Lammerts' commitment to recent-creationism and flood-geology, a commitment he has maintained all his life.⁵

Henry Morris, another important CRS founder, entered Rice University in Houston, Texas, nominally committed to his Christian faith and theistic evolution. While at Rice he also read **The New Geology** and several books by Harry Rimmer, a famous evangelist who ardently supported recent-creationism through sermons,

²See below, p. 68, for details of these particular interpretations. Since these two points are not specifically covered in the "Statement," acceptance of them is not required for membership in the CRS.

³Walter Lammerts, personal letter, November 10, 1987. Lammerts did not recall the minister's name.

⁴George McCready Price, **The New Geology** (Mountain View, California: Pacific Press, 1923). See below, pp. 11-13, for a discussion of George McCready Price and his work.

⁵Walter Lammerts, "The Creationist Movement in the United States: A Personal Account," **Journal of Christian Reconstruction** 1 (Summer, 1974) 49-63.

debates and his many publications.⁶ These works strengthened Morris's Christianity, his creationism, and his desire to evangelize others to both concepts.⁷

The involvement of the majority of the other CRS founders in religious educational institutions demonstrates that they, too, held a definite religious commitment. Five of the ten founders of the CRS (John Klotz, Frank Marsh, Edwin Monsma, Wilbert Rusch, and William Tinkle) taught science at church-related colleges and one (R. Laird Harris) taught Old Testament Studies at a Lutheran Seminary.⁸ Most of these men were creationists because they were Christians; the latter commitment led to the former.

The Society's Theological Commitment

The papers these men published in the Society's journal, **The Creation Research Society Quarterly**, demonstrate the intensity of their religious commitment.⁹ Founder William Tinkle, who taught biology at Anderson College, a Seventh-Day Adventist school in Berrien Springs, Michigan, and later Taylor University, a Methodist school in Upland, Indiana, argued that the only reasonable explanation for the form and color of flowers is that God "purposely created a world of variety and beauty."¹⁰

Morris argued that non-Christians cannot properly interpret either the data of science or Scripture:

⁶See below, pp. 10-11, for a brief description of Rimmer's work.

⁷Henry M. Morris, **History of Modern Creationism** (San Diego: Master Books, Inc., 1984), pp. 79-101.

⁸Henry M. Morris, **History of Modern Creationism** (n. 7), 178-180.

⁹See below, pp. 62-112, for a detailed discussion of this journal.

¹⁰William J. Tinkle, "The Jack-in-the-Pulpit Preaches a Sermon," **CRSQ** 6 (June, 1969) 65-66.

In the deepest sense, it is only the believing Christian who is equipped to think rationally about the great themes of origins and destinies, for "the fear of the Lord is the beginning of wisdom." (Proverbs 9:10) The believing Christian has been "transformed by the renewing of his mind." (Romans 12:2) The unbeliever, on the other hand, has his "understanding darkened." (Ephesians 4:18) He does "not like to retain God in his knowledge" (Romans 1:28) and so must push God as far back in time and as far away in space as he possibly can.¹¹

The creation--evolution issue, for Morris, was not strictly an interpretation of scientific data but was "fundamentally . . . a spiritual, rather than a scientific, problem."¹² As the result of sin, unbelievers are incapable of properly evaluating spiritual issues and opt for evolution instead of creation "as the ultimate foundation of life and meaning."¹³ He also argued that evolutionary science,

"science falsely so-called," has been a great stumblingblock to multitudes in our time and has effectively kept them from recognizing that the Holy Scriptures can lead them to saving faith in Christ Jesus.¹⁴

Thus one strong motive for arguing creationism was, according to Morris, to evangelize people to Jesus Christ, delivering them "from godless scientism of the age and leading them to the Author of true science."¹⁵

The founders held a common religious commitment, and they required a similar commitment of all who join the CRS. The "Statement of Belief" is printed upon every application blank which all individuals are required to sign, indicating their agreement with the "Statement." Thus the CRS deliberately restricted its appeal to one specific group of creationists, those who share the Society's particular theological view of Christianity and interpretation of Scripture.

¹¹Henry Morris, "Comments from President Morris," **CRSQ** 6 (December, 1969) 120, 155.

¹²Henry Morris, "Comments from the President," **CRSQ** 5 (June, 1968) 64.

¹³*Ibid.*

¹⁴Henry M. Morris, "Comments From President Morris," **CRSQ** 8 (December, 1971) 160-161.

¹⁵*Ibid.*

Antecedent Creationist Organizations

The Creation Research Society was not the first creationist organization to hold such views. A few creationist groups came out of the fundamentalist movement of the 1920's, but these did not survive long enough to have a significant impact on the creation-evolution debate. They lacked a critical mass of scientifically trained creationists and had a surplus of internal dissention.¹⁶

The Research Science Bureau

One of these groups, the Research Science Bureau, was established by evangelist and Bible teacher Harry Rimmer in 1921. It held no meetings, had no officers, save Rimmer, and published only Rimmer's booklets.¹⁷ Through these pamphlets and his many meetings, Rimmer popularized an older creationist view called the "gap theory," one attempt to reconcile a literal interpretation of Genesis with the long time required by modern geology. According to this view the initial creation of the physical universe, as described in Genesis 1:1, took place in the distant past. Following a long period of time, perhaps sufficient to account for the geological ages, Lucifer, a spirit being whose throne was on earth, rebelled against God who subsequently judged him. As part of this judgment He destroyed Lucifer's home, the earth, by a universal flood. God then remade the earth in a form suitable for life as we know it. Genesis 1:2 and the following passages describe this re-creation. The gap theory

¹⁶Ronald L. Numbers, "The Creationists," in David C. Lindberg and Ronald L. Numbers, **God and Nature: Historical Essays on the Encounter Between Christianity and Science** (Berkeley: The University of California Press, 1986), p. 404. Another source of information on these early groups is Henry M. Morris, **History of Modern Creationism** (n. 7), and F. Alton Everest, "The American Scientific Affiliation—The First Decade," **Journal of the American Scientific Affiliation** 3 (September, 1952) 33-38.

¹⁷These booklets led to the best-known of Rimmer's works, **The Harmony of Science and Scripture** (Grand Rapids: Wm. B. Eerdmans Publishing Company, 1936).

became immensely popular with conservative Christians, but the Research Science Bureau failed to attract a significant following and died with Rimmer in 1952.¹⁸

The Religion and Science Association

In 1935 three men, Dudley Joseph Whitney, a farm journalist, George McCready Price, a Seventh-day Adventist advocate of special creationism, and Byron Nelson, a Lutheran clergyman, formed a creationist organization called the Religion and Science Association. This group held their first and only “annual” meeting in March, 1936.¹⁹

Whitney, Price, and Nelson were committed to recent-creationism and flood-geology. They rejected the gap theory and held that God created the physical universe in six twenty-four-hour days around 10,000 years ago. They also rejected “progressive creationism,” the belief that the creation week describes separate creative acts which are separated by long periods of time in which the created life forms developed through an evolutionary process.²⁰ The creation week was, in their view, six 24-hour-days long, so they also rejected “theistic evolution,” another compromising view which maintains that God originally created life, then superintended its evolutionary development. Their universe simply was too young to allow for such slow development. They interpreted evidence such as fossils and strata, not as support for the

¹⁸The gap theory was included in the explanatory notes in one of the most influential publications of the fundamentalist movement, **The Scofield Reference Bible** (New York: Oxford University Press, 1945). For a summary of the importance of this book and the views it presented see Ernest R. Sandeen, **The Roots of Fundamentalism: British and American Millenarianism, 1800-1930** (Grand Rapids: Baker Book House, 1978), pp. 222-224.

¹⁹Numbers, “The Creationists” (n. 16), p. 404.

²⁰For a more detailed explanation of progressive creationism, see Bernard Ramm, **The Christian View of Science and Scripture** (Grand Rapids: Wm. B. Eerdmans Publishing Company, 1955), 227-229. Price’s views were best stated in **The New Geology** (n. 4).

geologic ages, but as the results of the universal, year-long Noahican Deluge. The Flood accomplished in one year what normal processes would have taken millions of years to accomplish.

The three founders invited L. Allen Higley, Chairman of the Department of Chemistry and Geology at Wheaton College, Wheaton, Illinois, to be the group's first President. Higley, however, was adamantly committed to the gap theory. This disagreement and refusal of the founders to accept divergent views broke the back of this group, and by 1937 it disintegrated. None of the papers presented at their one meeting were published.²¹

The Deluge Society

Six years after the demise of the Religion and Science Association, Price and a number of fellow Seventh-day Adventists connected with The College of Medical Evangelists (later Loma Linda University) in Los Angeles organized a third creationist group, called either the Deluge Geology Society or the Creation-Deluge Society.²² Between 1941 and 1945 this group published **The Bulletin of Deluge Geology and Related Sciences** which was mailed to over two hundred subscribers. In a letter to Harold W. Clark, his former student and fellow professor at the College, Price described this group as

²¹Morris, **History of Modern Creationism** (n. 7), pp. 112-117.

²²Morris indicated that the group's first official name was the "Society for the Study of Deluge Geology and Related Sciences." When they officially incorporated in December, 1944, their name was "The Natural History Research Group, A Society for the Study of Creation, the Deluge, and Related Sciences." Morris, **History of Modern Creationism** (n. 7), p. 118.

a very eminent set of men. . . . In no other part of this round globe could anything like the number of scientifically educated believers in Creation and opponents of evolution be assembled, as here in Southern California.²³

In spite of Price's optimistic assessment, the Deluge Society fell apart in 1945. The issue was not lack of scientifically-trained creationists, but the same reef that sank The Religion and Science Association—a lack of internal agreement over the acceptable limits and definition of “creationism.” Price and the Society's Executive Secretary, Ben Allen, strongly argued that the Society should stand firm for recent-creationism and flood-geology. A majority in the Society disagreed with him and, in 1945, voted the flood-geology leadership out of office. The Deluge Society was dissolved by the new leadership and another organization established in its place. This group, “The Society for the Study of Natural Science,” did not last beyond 1948.²⁴

The American Scientific Affiliation

While the Deluge Society was coming apart, a handful of other creationists founded what came to be the most important creationist organization up to that time: the American Scientific Affiliation (ASA). It is still a flourishing organization, actively engaged in publishing books and a journal containing essays covering the interface of science and Christianity.²⁵

²³George M. Price, letter to Harold W. Clark, October 23, 1944, cited by Ronald Numbers, “Sciences of Satanic Origin: Adventist Attitudes Toward Evolutionary Biology and Geology,” **Spectrum** 9 (January, 1979) 26.

²⁴Morris, **History of Modern Creationism** (n. 7), p. 124.

²⁵The journal is **The Journal of the American Scientific Affiliation**, hereafter referred to as **JASA**. It has been published regularly since 1949. In 1987 journal's title was changed to **Perspectives on Science and the Christian Faith**.

The ASA's Origin

The ASA was the result of a dream shared by the then president of Chicago's Moody Bible Institute and a young clergyman in Los Angeles. In 1938 Will H. Houghton, the Institute's president, met a Moody alumnus, Irwin A. Moon, who was a young pastor in Los Angeles. Moon had developed a series of popular sermons illustrated by dramatic scientific demonstrations.²⁶ Impressed by this use of science in evangelism, Houghton invited him to continue his "Sermons from Science" under the auspices of the Moody Bible Institute. Houghton was especially concerned about the spiritual fate of the many Christian students who were confronting evolution in secular universities and colleges. He felt that Moon's blend of science and Christianity could be used to encourage such students and urged Moon to extend his ministry to college campuses.²⁷

He also encouraged Moon to consider the formation of an organization of "reputable men of science who were also Christians" to encourage young people who were "eager for reassurance that modern scientific knowledge does not rule out faith."²⁸ In November, 1940, Moon was lecturing in Salem, Oregon, where he met F. Alton Everest, an engineering professor at Oregon State University. Moon and Everest discussed Houghton's dream, and Everest joined Moon in this venture. Together the two men drafted a proposed constitution for such a group.

In June, 1941, Everest and four others, two science teachers from church-related colleges, a mathematics teacher from a city college, and an engineer, met in

²⁶Bernard R. DeRemer, **Moody Bible Institute: A Pictorial History** (Chicago: Moody Press, 1960), 85. Moon's work led to the founding of the Moody Institute of Science in 1947.

²⁷Wilbur M. Smith, **A Watchman on the Wall: Life Story of Will H. Houghton** (Grand Rapids, Michigan: Wm. B. Eerdmans Publishing Company, 1951), pp. 146-146.

²⁸F. Alton Everest, "The American Scientific Affiliation—The First Decade" (n. 16), p. 36.

Chicago at the invitation of Houghton and H. Coleman Crowell, the Vice-President of the Moody Bible Institute.²⁹ They discussed the initial plans for organizing an association of Christian scientists, called the American Scientific Affiliation, and adopted a constitution for the proposed group. The men also accepted Houghton's suggestion that the new association not be affiliated with any school or denomination. They elected Everest Chairman and Irving A. Cowperthwaite to be Secretary-Treasurer, and then adjourned.³⁰

The American Scientific Affiliation had two purposes: to provide support for its membership and to encourage Christians outside the ASA, especially college and university students, in their confrontation with the claims of science. Regarding the first, Cowperthwaite wrote,

In considering the needs of Christian men of science scattered throughout our country, and beyond our borders, it was felt that a distinctively Christian-oriented organization had much to offer. . . . [Existing scientific] societies could profitably be supplemented by a new society presenting a Christian philosophy of science where Christian men of science could meet in an atmosphere of worship and fellowship in Christ.³¹

²⁹The four were Peter Stoner, Professor of Mathematics and Astronomy at Pasadena City College, John P. Van Haltsma, Professor of Organic Science at a Christian Reformed school, Calvin College, in Michigan, Russell D. Sturgis, Professor of Chemistry at a United Church of Christ school, Ursinus College, in Pennsylvania, and Irving A. Cowperthwaite, Plant Engineer for the Thompson Wire Company in Massachusetts. Morris, **History of Creationism** (n. 7), p. 132.

These men came in response to a letter from Houghton inviting them to an all-expense-paid conference to discuss the founding of a new organization. A copy of this letter, called "The Birth Certificate of the American Scientific Affiliation," is found in Smith, **Watchman on the Wall** (n. 27), pp. 142-144.

³⁰Smith, **Watchman on the Wall** (n. 27), p. 37. See also I. A. Cowperthwaite, "Twenty Years with the American Scientific Affiliation," **JASA** 7 (September, 1955) 5, and Harold Hartzler, "The A.S.A. History and Purposes," **JASA** 7 (September, 1955) 3-5.

³¹I. A. Cowperthwaite, "Twenty Years with the American Scientific Affiliation" (n. 30), p. 99.

To this end the American Scientific Affiliation tried to build a scholarly bridge between science and the Bible to help students.³² In 1948 they produced their first effort at bridge-building, **Modern Science and the Christian Faith: Eleven Essays on the Relationship of the Bible to Modern Science**.³³ These essays presented a Christian philosophy of science and origins as applied to various areas of science. The book, however, went unnoticed by the scientific community, for no reviews of it were published in the regular journals.³⁴ One year later they began the **Journal of the American Scientific Affiliation**, which has been published continually since that date.³⁵

How did the ASA achieve both longevity and some degree of popularity? First, the founders, notably Houghton and Crowell of Moody, were committed to the

³²William Craig, "Evangelicals and Evolution: An Analysis of the Debate Between the Creation Research Society and the American Scientific Affiliation," **Journal of the Evangelical Theological Society** 17 (Summer, 1974) 132.

³³The contributors were Frank Allen, retired Head of the Department of Physics, University of Manitoba; Edwin Gedney, geology professor at Gordon College, Boston, Massachusetts.; R. Laird Harris, Professor of Biblical Exegesis, Faith Theological Seminary, Wilmington, Delaware; George R. Horner, Professor of Anthropology and Archaeology at Wheaton College, Wheaton, Illinois; Walter E. Lammerts, horticultural consultant; Allan A. MacRae, Professor of Old Testament, Faith Theological Seminary, Wilmington, Delaware; Peter W. Stoner, Chairman of the Department of Mathematics and Astronomy, Pasadena City College, Pasadena, California; Hawley O. Taylor, retired Chairman of the Department of Mathematics, Physics, and Astronomy, Wheaton College, Wheaton, Illinois; William J. Tinkle Chairman of the Department of Biology, Taylor University, Upland, Indiana; William R. Vis, a medical doctor in Grand Rapids, Michigan; Roger J. Voskuyl, Professor of Chemistry at Wheaton College, Wheaton, Illinois; and F. Alton Everest, Associate Director of Moody Institute of Science, Los Angeles, California. Later Harris, Lammerts, and Tinkle helped start the Creation Research Society. **Modern Science and the Christian Faith: Eleven Essays on the Relationship of the Bible to Modern Science**. Wheaton, Illinois: Van Kampen Press, 1948.

³⁴None of the book review indices in the Oregon State library had any reference to any review of this book. Those indices are **National Library Service Cumulative Book Review Index: 1905-1979**, **Combined Retrospective Index to Book Reviews in Scholarly Journals: 1886-1974**, and **Book Review Digest: 1905-1974**.

³⁵I. A. Cowperthwaite, "Twenty Years with the American Scientific Affiliation" (n. 30), p. 99. Also see details in Note 25.

American Scientific Affiliation, not to building a personal empire, and kept the group free from organizational or denominational ties. Further, the ASA avoided taking official stands on specific scientific issues, especially on the evolution-creation question. As a result, issues of the **JASA** contained articles representing the complete spectrum of creationist opinion.³⁶ The ASA prospered within this framework of organizational freedom and lack of official internal dissention.

The advent of World War II forced a halt to the organizational efforts of the ASA, primarily due to travel restrictions. But Everest's wartime duties required a great deal of professional travel, during which he was able to recruit members for the ASA. By the end of World War II around seventy people had joined the Affiliation. Five years later that number had tripled and by 1961 the number had quadrupled again for a total of 860. This growth necessitated several constitutional changes as the ASA attempted to keep the number of voting members small yet allow for an increasing membership. The problem was resolved by establishing several classes of membership, only some of which were eligible to vote on ASA business.³⁷

The ASA and Inerrancy

In addition to the problems of increased growth the ASA faced a difficult theological issue as well: the question of the inerrancy of the Scriptures. The ASA's 1950 constitution contained a fairly lengthy doctrinal statement which affirmed that the Bible is uniquely inspired by God, is inerrant in the original writings, is a true

³⁶For example, Walter E. Lammerts and John C. Sinclair, "Creation in Terms of Modern Concepts of Genetics and Plants," **JASA** 5 (September, 1953) 9, argued for limited development within recently-created groups while Laurence J. Kulp, "Deluge Geology," **JASA** 1 (June, 1949), 1-15 rejected the basic tenets of flood geology and recent-creationism.

³⁷The first constitutional revision was in 1950 and the second in 1959. I. A. Cowperthwaite, "Twenty Years with the American Scientific Affiliation" (n. 30), p. 102.

revelation of Him, and is accepted as the final authority in matters of faith and conduct.³⁸ However, the 1959 constitutional revised this position and identified the Bible as the only “unerring guide to faith and conduct.” This statement was not as restrictive, or definitive, depending on a person's viewpoint, as the first one. It permitted acceptance of the Bible as authoritative, but it also allowed for the concept of limited inerrancy. The Bible, according to this concept, is without errors in some statements, especially those dealing with spiritual matters, but may be in error in other statements, especially in scientific matters. The 1959 statement further affirmed that God was the creator, that certain laws are discernable in the manner in which God sustains the universe, and that the scientific approach is capable of giving reliable information about the natural world.³⁹

The question of Biblical inerrancy has been discussed many times in the **JASA**, and the discussions show a definite shift of opinion away from the conservative view.⁴⁰ In 1956, for example, the **Journal's** Editor supported the conservative view of the complete inerrancy of the original Scriptures.⁴¹ However, by 1963 some **Journal** papers were arguing for limited inerrancy, that is, the Bible is inerrant when it addresses matters of faith, but its statements regarding science and history are

³⁸“American Scientific Affiliation Statement of Faith,” cited by William Duke, “The American Scientific Affiliation and the Creation Research Society: The Creation-Evolution Issue” (Ph.D. dissertation, Southwestern Baptist Theological Seminary, Fort Worth, Texas, 1982) p. 55. Henry Morris gives a similar version of the Affiliation's 1951 statement of faith in **History of Modern Creationism** (n.7), p. 134.

³⁹“American Scientific Affiliation application blank,” **JASA** 40 (March, 1988).

⁴⁰This shift is discussed in detail by William Duke, “The American Scientific Affiliation and the Creation Research Society: The Creation-Evolution Issue” (Note 38), pp. 54ff.

⁴¹Delbert N. Eggenberger, “Journal Publications,” **JASA** 8 (December, 1956) 2.

subject to the limitations of the authors' culture.⁴² Among the ASA members who remained committed to total inerrancy were most of those who founded the Creation Research Society.⁴³

The ASA and Evolution

The ASA's shift away from an acceptance of complete Biblical inerrancy was reflected in its approach to the question of origins. The group took no official position on the accuracy or the interpretation of the Genesis account of creation, nor did they officially support any one view of origins. This position was maintained by the ASA's leadership who chose to relegate such questions to the realm of scientific observation, rather than Biblical exegesis. They recognized that many Christians rejected evolution because evolutionary philosophy could be used to eliminate God or His involvement in the physical universe. But they also recognized that evolution was an accepted scientific theory which did explain many facts of the physical universe. Thus, as an ASA promotional brochure stated,

These legitimate differences of opinion among Christians who have studied both the Bible and biological science are freely expressed within the Affiliation in a context of brotherly love and concern for truth.⁴⁴

In 1955 ASA President H. Harold Hartzler saw this as a definite strength of the Affiliation.

⁴²Richard H. Bube, "A Perspective on Scriptural Inerrancy," *JASA* 15 (September, 1963) 86-92. The issue was still unresolved ten years later, as evidenced by Russell W. Maatman and Richard H. Bube, "Dialogue: Inerrancy, Revelation and Evolution," *JASA* 24 (June, 1972) 80-88.

⁴³Nine of ten founders of the CRS were members of the ASA. William Duke, "The American Scientific Affiliation and the Creation Research Society: The Creation-Evolution Issue" (n. 38), p. 127

⁴⁴The entire statement is found in section 4 of the ASA brochure, **The American Scientific Affiliation** (Ipswich, MA: The American Scientific Affiliation, n.d.), which was published after 1982 based on internal evidence.

I should state here and now that the A.S.A. does not have any official policy on any scientific matter. After all, scientific theories come and go. They are seasonal. What is good science today may not be good science tomorrow. But we continue to believe that the Word of God is firmly established forever.⁴⁵

Ten years later President V. Elving Anderson also supported this approach:

It is when we come to the interpretation of specific Bible passages or to the meaning of current scientific data and theories that we begin to find disagreement. The Executive Council has repeatedly been urged to adopt a clear stand on such items as well. But after considerable discussion and prayer the members of the Council have decided against such an approach.⁴⁶

The majority agreed with Anderson, but among those who did not were some whose commitment to recent-creationism led to the foundation of the Creation Research Society.

The ASA and Creationism

The fact that the Association took no official position on the creation-evolution issue made possible a change in the ASA's emphasis on the topic. Initially the Affiliation was committed to a strict creationism, not by official statement, but by consensus of the leaders. Walter Lammerts, an early ASA Fellow (and first President of the CRS), wrote,

When I was asked to join in 1943 by Alton F. Everest, he assured me that the stance of the society would be anti-evolutionary. At least that was my understanding of the editorial policy to be followed.⁴⁷

It did not remain so. A new generation of university-trained scientists was moving into the ASA. and they wanted to bring evangelical Christianity more into line with

⁴⁵H. Harold Hartzler, "The A.S.A. History and Purposes," **JASA** 13 (December, 1961) 98-102. See also F. Alton Everest, "The American Scientific Affiliation - The First Decade" (n. 16), p. 35. Hartzler is also a member of the Creation Research Society, so it follows that he holds a very conservative view of scripture. Harold Hartzler, personal letter, October 14, 1987.

⁴⁶V. Elving Anderson, "The Goals of the ASA--A Personal View," **JASA** 17 (June, 1965) 34-35.

⁴⁷Walter E. Lammerts, "The Creationist Movement in the United States: A Personal Account" (n. 5), p. 54.

mainstream science⁴⁸ The Association's open position on evolution permitted these people to argue successfully for a wider acceptance of evolutionary theory.

This resulted in a wide diversity of papers published in the ASA's **Journal** during the first fifteen years of its existence.⁴⁹ A 1959 paper, for example, argued that the days of Genesis 1 "were of variable and indefinitely long duration."⁵⁰ On the other hand, another claimed that

A careful study of the facts of genetics, embryology, geology and paleontology will show that all the marvelous complexity of the plant and animal kingdoms was created from a common sum of genes arranged in various integrated patterns of complexity. Their materialization as recorded in Genesis was accomplished in a very few days.⁵¹

The ASA's official shift to a more evolution-oriented position created major problems for the strict creationists within the Association. It also caused some individuals to reevaluate their original views and adopt a different position. Such change did not come about easily. In 1959, for example, J. Frank Cassel, a teacher at North Dakota State College and member of the ASA, published a revealing article, "The Evolution of Evangelical Thinking on Evolution," in which he chronicled the development of his thinking on evolution. He began with the idea that evolution was

⁴⁸Ronald L. Numbers, "The Creationists (n. 16)," pp. 404-405.

⁴⁹For a sampling of the topics covered in the *Journal* up to 1961 see Delbert N. Eggenberger, "The ASA Periodical: The First One and One-Half Decades," **JASA** 15 (March, 1963) 3. While this only covers **Journal** papers through 1961, these are the years of the development of the strong creationist movement within the ASA.

⁵⁰Edwin Walhout, "Sequence in the Days of Genesis One," **JASA** 11 (June, 1959) 6-8. In what was probably a touch of editorial irony, this article was immediately followed by a Letter to the Editor from William Tinkle in which he criticizes the ASA for not settling on some principles and then seeking converts. Since Tinkle became one of the founders of the Creation Research Society, the "principles" he had in mind probably would have included a 24-hour interpretation of the days of Genesis. William Tinkle, "The A.S.A. in Retrospect: Letter to the Editor," **JASA** 8-9.

⁵¹Walter E. Lammerts and John C. Sinclair, "Creation in Terms of Modern Concepts of Genetics and Plants," **JASA** 5 (September, 1953) 9.

wrong, if not evil, but he was “struck with the availability and undeniability of datum after datum.” The ultimate acceptance of the evolutionary concept

has been a heart-rending, soul-searching experience for the committed Christian as he has seen what he had long considered the *raison d’etre* of God’s call for his life endeavor fade away, and as he has struggled to release strongly held convictions as to the close limitations of Creationism.⁵²

Cassel concluded that the spectrum of beliefs about evolution within the ASA “would have shocked all of us at the inception of our organization.” While some saw this change as the beginning of the end for the ASA, Cassel saw it as the start of the ASA’s move to claim its full potential for contribution to both the Christian and scientific communities.

The American Scientific Affiliation had changed. Acceptance of evolution within the group ranged from recognizing evolutionary development as “the most likely way God accomplished much of His creation,” to complete acceptance of theistic evolution.⁵³ These changes upset those within the ASA who wanted a more definitive and conservative position on both inerrancy and creationism. The connection between the two concepts was axiomatic for some. The Bible, they argued, contained no errors and a literal reading of Genesis supported recent-creationism. If evolution in any form be true, they felt, inerrancy must be compromised. For example, in 1959 William Tinkle, who became one of the founders of the Creation Research Society, chided the ASA for its failure to take a stand on Biblical inerrancy:

⁵²J. Frank Cassel, “The Evolution of Evangelical Thinking on Evolution,” **JASA** 11 (December, 1959) 26-27. The quote is from page 27. Another similar, challenging article regarding the personal tension the author felt between creation and evolution is Gareth Jones, “Evolution: A Personal Dilemma,” **JASA** 29 (June, 1977) 73-76.

⁵³Russel L. Mixter, “An Evaluation of the Fossil Record,” **JASA** 11 (December, 1959) 24-27. Theistic evolution was espoused by Walter Hearn, editor of the **Journal**, in a chapter of an ASA-sponsored book. Walter R. Hearn and Richard A. Hendrix, “The Origin of Life,” in Russel L. Mixter, editor, **Evolution and Christian Thought** (Grand Rapids: Wm. B. Eerdmans Publishing Company, 1959), pp. 68-69.

The A.S.A. has conducted a good open forum but such a method is limited in its scope of usefulness. We ought to settle some principles, then go out and make converts among other scientists. We have no united, forceful campaign to correct the mistakes of scientists which have lessened faith in the Bible. Some members even seem willing to admit that there may be mistakes [in it].⁵⁴

In 1963, the year that the CRS began, John Klotz, another CRS founder, published a paper in the **JASA** in which he rejected theistic evolution as both unscientific and unscriptural.⁵⁵ The fact that these papers were published in the **Journal** demonstrated that recent-creationists had access to this forum. Even so, they were increasingly frustrated by their inability to convince the ASA to adopt a conservative position on creation.

The ASA and Recent-Creationism

The most persistent of these critics was Henry M. Morris, a Professor of Engineering at Virginia Polytechnic Institute who had joined the ASA in 1948. Soon after joining Morris tried to interest the Affiliation leadership in adopting a neutral, if not favorable attitude toward recent-creationism and flood-geology. His efforts were unsuccessful, but he did motivate some in the ASA to evaluate the concept of flood-geology. In 1950 J. Laurence Kulp, a geologist and member of the ASA Executive Council, published a paper in the **Journal** in which he evaluated this concept and rejected it in the strongest terms.⁵⁶ Kulp argued that flood-geology was contradicted by the "established physical and chemical laws" and was based on only one possible interpretation of Genesis. He further argued that the concept was "dangerous" because

⁵⁴William Tinkle, "The A.S.A. in Retrospect: Letter to the Editor" (n. 50), pp. 8-9. Other such critics include R. Laird Harris, "Communications: The Typical Modernistic View of Scripture," **JASA** 21 (September, 1969) 92-93. Also see Duke, "The American Scientific Affiliation and the Creation Research Society" (n. 38), pp. 54 ff. for more details.

⁵⁵John W. Klotz, "Theistic Evolution: Some Theological Implications," **JASA** 15 (September, 1963) 82-86.

⁵⁶J. Laurence Kulp, "Deluge Geology," **JASA** 2 (March, 1950) 15.

it will do “considerable harm to the strong propagation of the gospel among educated people.” Needless to say, these conclusions did not sit well with Morris, who grew increasingly dissatisfied with the ASA.⁵⁷

His dissatisfaction was shared by others, and in the late 1950's some of them began to consider forming another organization, one that would be formally committed to a recent-creationist position. One of these individuals was Walter Lammerts who had been thinking of a new organization as early as 1957:

I believe that a great deal of good could be accomplished if an informal association of all the various men who are interested in this theory [flood-geology] could be formed and exchange of ideas brought about by correspondence and perhaps an occasional meeting. There is certainly within the American Scientific Affiliation group a small minority of men who would like to look with favor on this point of view.⁵⁸

Morris, Lammerts, and a few others pursued this idea. Six years after Lammert's remarks the Creation Research Society was founded.

Although most of the founders of the Creation Research Society were ASA members, neither the ASA leadership nor the founders of the CRS looked upon the Society as a splinter group of the ASA. Yet dissatisfaction with the ASA's shift from total inerrancy of Scripture and a strict creationist position was a basic motivation for starting the Creation Research Society.

Publication of **The Genesis Flood**

A far more important factor was provided by a book. Books frequently have initiated major events in the creation-evolution controversy. For example, the publication of evolutionary-oriented natural history texts and their increased use in

⁵⁷Morris gives the details of his growing disaffection with the ASA in **History of Modern Creationism** (n. 7), pp. 136-139.

⁵⁸Walter E. Lammerts, letter to John Whitcomb, November 27, 1957, John C. Whitcomb, personal files.

public education was one stimulus for the anti-evolution crusade of the 1920's.⁵⁹ A number of writers also identify the recent increase in pro-creation (anti-evolution) legislation and agitation in the 1960's as a negative response to the publication of the Biological Sciences Curriculum Study texts.⁶⁰

In 1961 two recent-creationist writers published the first major presentation of flood-geology since 1923 when George Price published **The New Geology**.⁶¹ Their book, **The Genesis Flood**, restated the technical arguments for recent-creationism and flood geology with an impressive array of new data to support them. This book catalyzed a revival of recent-creationism and the organization of the Creation Research Society. Through its scholarly format and extensive documentation the book caught the attention of strict creationists and helped bring about a renewed interest in flood-geology.⁶² More importantly, the four years of research, writing,

⁵⁹Edward J. Larson, "Before the Crusade: Evolution in American Secondary Education Before 1920," **Journal of the History of Biology** 20 (Spring, 1987) 89-114.

⁶⁰These texts, produced under National Science Foundation funding, made evolution the central theme of biology instead of a separate chapter and were widely used in public high school biology classes. Further details about them are in Judith V. Grabiner and Peter D. Miller, "The Effects of the Scopes Trial," **Science** 185 (September 7, 1974) 833. Also see Ronald L. Numbers, "The Creationists (n. 2, p. 8)," pp. 410-411, and Dorothy Nelkin, "The Science-Textbook Controversies," **Scientific American** 234 (April, 1976) 33-39. Three versions of these books were published. The "Yellow" version emphasized cell biology: Donald E. Meyer and Virginia M. Dryden, editors, **BSCS High School Biology: Yellow Version** (New York: Harcourt, Brace, and World, 1963). The "Blue" version emphasized molecular biology: American Institute of Biological Sciences, **Biological Science: Molecules to Man** (Boston, Massachusetts: Houghton-Mifflin Company, 1963). The "Green" version dealt with ecology: American Institute of Biological Sciences, **High School Biology: BSCS Green Version** (New York: Rand McNally, Inc., 1963).

⁶¹Henry M. Morris and John C. Whitcomb, **The Genesis Flood: The Biblical Record and Its Scientific Implications** (Philadelphia: The Presbyterian and Reformed Publishing Company, 1961). George M. Price, **The New Geology** (n. 4).

⁶²Ronald Numbers, "Creationism in 20th Century America," **Science** 218 (November, 1982) 542. See also Davis A. Young, **Creation and the Flood** (Grand Rapids, Michigan: Baker Book House, 1977), p. 7.

and reviewing brought together an informal group of creationists whose association culminated in the organization of the CRS.

The book's two authors were John C. Whitcomb, a professor of Old Testament Theology at Grace Theological Seminary in Winona Lake, Indiana, and Henry Morris, the Virginia Polytechnic Institute engineering professor. As an undergraduate at Rice Institute, later Rice University, in Houston, Texas, Morris had read the works of Rimmer and Price and was convinced that the Bible supported a recent-creation, flood-geology scheme.⁶³ He was so convinced of flood-geology's validity that, when he entered the University of Minnesota's Ph.D. program in 1947, he chose a major in hydraulics and a minor in geology because he felt that,

this was the best combination with which to develop a sound system of deluge geology, and that this, in turn, had to be the key in a genuinely Biblical doctrine of creationism.⁶⁴

During his graduate study he worked on a manuscript which he hoped would eventually become the definitive volume on Biblical creationism and flood-geology.⁶⁵ Though this book was never published, the manuscript continued to increase in size and scope, as did Morris's interest in and enthusiasm for the subject.

In 1953 Morris attended the September meeting of the American Scientific Affiliation where he presented a paper supporting flood-geology. One of the few positive responses he received came from Whitcomb, then a young theology professor, who was impressed by Morris's arguments. When, in 1955, Whitcomb wrote his Th.D.

⁶³See above, pp. 10-13, for details of Rimmer and Price. Morris describes their influence on him in **History of Modern Creationism** (n. 7), pp. 79-80, 88-92. Reading Price's book was, Morris writes, a "life-changing experience." Robert Prince offers a succinct biographical sketch of Henry Morris in "An Examination of Henry M. Morris's Interpretation of Biblical Creation" (Doctoral dissertation, Southwestern Baptist Theological Seminary, Fort Worth, Texas, 1975), pp. 46-51.

⁶⁴Morris, **History of Modern Creationism** (n. 7), 147.

⁶⁵**Ibid.**

dissertation at Grace Theological Seminary on the Noahican Deluge, he asked Morris for suggestions and references.⁶⁶ Morris then sent him a copy of his unpublished manuscript, and a major link in creationist history was forged.

In 1957 Whitcomb submitted his completed dissertation to Moody Press for publication, and they advised him to have a scientist review it for accuracy. Morris was the obvious choice. Four years later these two had combined Whitcomb's dissertation and Morris's manuscript into **The Genesis Flood**, published in 1961.

The book was ignored by most of the secular community and rejected by the American Scientific Affiliation.⁶⁷ In fact, the ASA did not publish reviews of the book until 1964, three years after it was published. Even then, Walter Hearn, the **Journal's** Editor, remarked that "Both of these reviews have been edited extensively. "to tone them down a bit." He then added his own comments:

Those who dwell inside the house of geological science have been in the process of remodeling it continuously ever since it was built. Now Henry Morris and John Whitcomb have come along insisting in the name of the Master Architect that the whole thing is on a shaky foundation and must be bulldozed to the ground. Detailed plans for the fine new edifice which should be built in its place, they claim, were found by them in the pages of the family Bible.⁶⁸

Recent-creationists, however, welcomed **The Genesis Flood** as a definitive work on strict creationism and flood-geology.⁶⁹ Here at last were answers to the

⁶⁶John C. Whitcomb, "The Genesis Flood," (Doctoral dissertation, Grace Theological Seminary, Winona Lake, Indiana, 1955). Although much of Whitcomb's work was incorporated into **The Genesis Flood**, his dissertation was never published as such.

⁶⁷**Book Review Digest** listed no reviews of **The Genesis Flood** from its publication through 1977 in the journals it surveyed. Reviews were published in the **JASA** and a conservative theological journal, **Bibliotheca Sacra: A Theological Quarterly**. See Notes 68 and 69 below.

⁶⁸Walter Hearn, "Book Reviews," **JASA** 16 (March, 1964) 27-31. The two reviews published were by Frank H. Roberts and Wayne U. Ault.

⁶⁹One such laudatory review was F. R. Howe, "Review of The Genesis Flood," **Bibliotheca Sacra: A Theological Quarterly** 118 (October, 1961) 357-358. Other details of the book's publication, reception, and effects on creationism are given by Charles

challenges of evolutionary geology, answers that utilized geology's own data. The book looked and sounded authoritative and convincing. To someone unconvinced by uniformitarian assumptions, its presentation was compelling.⁷⁰ Recent-creationists had new champions and new ammunition to fire at the enemy.

The book provided more than just a presentation of recent-creationism. Morris and Whitcomb had circulated their manuscript among known recent-creationists for evaluation and comment. Most of these men, including Walter Lammerts, were members of the American Scientific Affiliation whom Morris had met over the years. The extensive correspondence connected with this project brought these people together, some of whom, like Lammerts, were already thinking of establishing a new creationist organization.⁷¹ The manuscript of **The Genesis Flood** became the seed crystal around which the Creation Research Society formed. Those involved in the project found that they shared more than just a personal conviction in the truth of strict creationism. They also shared an intense desire to help others see the reality of that truth. The ASA had turned from recent-creationism to evolution and no longer provided them with the support they sought. Surely there was room for another group that would avoid the problems of disagreement and defection through an official commitment to Biblical inerrancy, strict creationism, and flood geology.

A. Clough, "Eight Years After: Effect of **The Genesis Flood**," **CRSQ** 6 (September, 1969) 81-84. Also see Charles A. Clough, "A Calm Appraisal of **The Genesis Flood**," Master of Theology thesis, Dallas Theological Seminary, Dallas, Texas, 1968.

⁷⁰Walter Hearn told Vernon Bates, "Morris' book looked very scholarly; it was full of footnotes; and it was on slick paper." Interview cited by Bates, "Christian Fundamentalism and the Theory of Evolution in Public School Education: A Study of the Creation Science Movement" (Doctoral dissertation, University of California at Davis, 1976), p. 80.

⁷¹**The Genesis Flood** represented a recent-creationist view while Lammerts and the other founders founded the Creation Research Society as a strict-creationist organization. Later the CRS adopted recent-creationism as its official position. See below, pp. 67-68, for details.

Those connected with **The Genesis Flood** thought there was and determined to establish it.

Chapter 2

ORGANIZATION OF THE CREATION RESEARCH SOCIETY

Starting an organization requires more than a group of interested people. It requires dynamic leadership that can fan the glow of interest into the fire of commitment. It requires leaders who can give strict attention to detail, provide encouragement in times of difficulty, and evangelize others with the organization's gospel. The Creation Research Society had such leaders and they built well, for the CRS is now the oldest recent-creationist group in existence with a membership of almost 2000.

Early Background

Much of the early efforts in the organization of CRS was the work of one man—Walter Lammerts. He is justly known as “the father of the Creation Research Society,” for he bore most of the burden of corresponding, encouraging, and editing during the Society's early years. Lammerts' background hardly prepared him for this task, for his professional life had been spent in teaching and research in plant breeding.¹ He had entered the University of California at Berkeley in 1923 a conservative Lutheran and a confirmed creationist, and was still a creationist when he graduated in 1930 with a Ph.D. in genetics.²

Lammerts joined the American Scientific Affiliation in 1943 when he was an Assistant Professor of Ornamental Horticulture at UCLA and in 1951 was elected a

¹Morris gives a brief biographical sketch of Lammerts in **History of Modern Creationism** (San Diego: Master Books, Inc., 1984), pp. 178-179.

²See above, p. 7 for more information on Lammert's creationist commitment.

Fellow of the Affiliation.³ In 1945 he left UCLA to work in private industry, and spent his remaining career with Germain's Seed Company in Livermore, California, as Research Director. He was an outspoken supporter of creationism within the ASA and one to whom John Whitcomb turned for advice regarding some technical points of his dissertation.⁴ He then served as a key advisor to Whitcomb and Morris when they wrote **The Genesis Flood**.

As part of his involvement in this project, Lammerts engaged in a wide-ranging correspondence with other creationists. Gradually the number of his regular creationist correspondents narrowed down to a group of ten.

Increasingly dissatisfied with the theistic evolutionary viewpoint of the ASA, I had begun to correspond with a "Team of Ten," who were dedicated creationists. These were Henry M. Morris, William J. Tinkle, Frank Marsh, John J. Grebe, John W. Klotz, Wilbert H. Rusch, Duane T. Gish, R. Laird Harris, and Edwin Monsma.⁵

All but Gish and Grebe had been involved in **The Genesis Flood** project. These ten not only accepted creationism, but they were also frustrated by their inability to get creation-oriented papers published in scientific journals.⁶ In light of this, they decided to organize a new scientific society which would provide support for creationism and mutual encouragement to creationists in the scientific world, produce scientifically acceptable literature supporting creationism, and do original research to demonstrate

³"Membership Data," **Journal of the American Scientific Affiliation (JASA)** 3 (September, 1951) vii.

⁴Walter E. Lammerts and John C. Sinclair, "Creation in Terms of Modern Concepts of Genetics and Plants," **JASA** 5 (September, 1953) 9.

⁵Walter E. Lammerts, "Early Steps in the Formation of the Creation Research Society," **The Creation Research Society Quarterly (CRSQ)** 12 (March, 1976) 213. William Tinkle, who gave the group its title, wrote his impressions in "Creationism in the Twentieth Century," **CRSQ** 10 (June, 1973) 44-47. Morris gives short biographies of each of these men in his **History of Modern Creation** (n. 1), pp. 178-180.

⁶Wilbert Rush, "A Brief Statement of the History and Aims of the CRS," **CRSQ** 19 (September, 1982) 149-150. This was *circa* 1960. In 1985 there was little evidence that creationists were publishing in or submitting papers to the leading scientific journals. See Eugenie C. Scott and Henry P. Cole, "The Elusive Scientific Basis of Creation 'Science'," **The Quarterly Review of Biology** 60 (March, 1985) 21-30.

the validity of their viewpoint. With Lammerts at the helm, they charted their course toward this end.

Early in 1963 this group took the title "Creation Research Committee" and Lammerts agreed to underwrite the cost of printing official letterhead stationery. In March he proudly sent Henry Morris, a co-author of **The Genesis Flood** and member of the "Team of Ten," the first letter written on the new stationery.⁷ The letter-head listed all "Team of Ten" members as well as the Haec Credimus of the new group, Exodus 20:11, "For in six days the Lord made heaven and earth, the sea, and all that in them is and rested on the seventh."

Nine of these ten men were members of the American Scientific Affiliation, so they used the June, 1963 meeting of the ASA at Asbury College in Wilmore, Kentucky as an opportunity to meet and finalize their plans.⁸ Following the ASA meeting six of them (Lammerts, Marsh, Klotz, Grebe, Gish and Rusch) along with three other interested men (John Moore, David Warriner, and Karl Linsenmann) accepted John Grebe's invitation to complete their work at his home in Midland, Michigan.

Their goal was to establish a new scientific society whose membership would be limited to those who accepted the inerrancy of Scripture, a literal interpretation of the Genesis account of creation, and flood-geology. This society would hold no public meetings, undertake no lobbying efforts, nor engage in publicity or promotion on behalf of strict creationism. Instead it would publish a journal devoted to recent creationist articles of a scientific nature and support research to uncover data supporting the scientific basis of creationism. In June, 1963, the Creation Research Committee

⁷Lammerts, letter to Henry Morris, March 16, 1963, University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection.

⁸Gish, Harris, Lammerts, Monsma, Morris, Rusch, and Tinkle were fellows of the ASA. Klotz and Marsh were members. Only Grebe was not a member. William Duke, "The American Scientific Affiliation and the Creation Research Society" (Ph.D. dissertation, Southwestern Baptist Theological Seminary, Fort Worth, Texas, 1982), p. 127, n. 72.

became the Creation Research Society with ten members and \$500 donated by Grebe in the treasury.⁹

These men succeeded where others failed, for twenty-seven years after its founding the Creation Research Society continues to pursue these goals. Data from 1983, the Society's twentieth anniversary, demonstrate the extent of their accomplishment. Membership was 1,954 and the Society's journal had a circulation of 2,265; the CRS owned its own book outlet, CRS Books, which had published eight creationist works; and the Society's Treasury had a balance \$118,532.41.¹⁰ These statistics and the continued existence of the CRS are a tribute to the energy, organizational skill, and commitment of its founders.

Three of the "Team of Ten," Lammerts, Morris, and Tinkle, had been involved with the defunct Deluge Society and were familiar with the problems of that group. In light of this experience the new group took two definite steps to avoid the conditions that led to that Deluge Society's demise. First, they established two categories of membership, sustaining and voting, to broaden the appeal of the group but keep control in the hands of "competent scientists."¹¹ Then, to avoid the internal warfare that ended the Deluge Society, they developed a position statement which defined their creationism and commitment to evangelical Christianity.¹²

⁹William Tinkle, "Report of the 1973 Board of Directors Meeting," **CRSQ** 10 (September, 1973) 124-125.

¹⁰The Society's journal is the **Creation Research Society Quarterly** which has been published since 1964. See pp. 62-112, for a detailed discussion of the **Quarterly**. Membership and journal circulation were provided to the author by the CRS. The financial and book data were taken from Wayne Frair, "Minutes of the 1983 Board of Directors Meeting," **CRSQ** 20 (September, 1983) 124-125.

¹¹Wilbert Rush, "A Brief Statement of the History and Aims of the CRS" (n. 6). pp. 149-150. See below, pp. 38-42, for further details on membership categories.

¹²See note 1, p. 6, for the complete text of the CRS's Statement of Belief.

The original group expanded to eighteen when Lammerts and Morris invited eight others to join the Society's "Steering Committee."¹³ Some of the additional eight, like Clifford Burdick, were already involved in the creationist movement.¹⁴ Others were personal friends of people already on the Steering Committee. Karl Linsenmann, for example, was a close friend of John Grebe. Thomas Barnes and Harold Slusher were recruited by Morris when he was in Texas at an engineering conference at the time of the CRS's organizational meeting.¹⁵ The Steering Committee became the Society's first Board of Directors which set the course of the organization.

The Board of Directors

One-third of the original Board was to serve a three-year term, one-third for a two-year term and one third for one year. From then on one-third of the Board was replaced annually with new members serving three-year terms. This procedure has been followed to the present. The Society maintained an eighteen-member Board until 1985 when the Board amended the Society's Constitution to allow the number of Board Members to vary between twelve and eighteen with the exact number for a given year decided upon at the annual meeting.¹⁶

In order to prevent any "take-over by evolutionists, as had happened in the ASA," the organizers made CRS Board self-perpetuating.¹⁷ Nominations for election

¹³The additional member were Thomas G. Barnes, Clifford L. Burdick, Karl M. Linsenmann, John N. Moore, Harold S. Slusher, David Warriner, Willis L. Webb and Paul A. Zimmerman.

¹⁴Clifford Burdick was a member of the Deluge Society.

¹⁵Henry Morris, **History of Modern Creationism** (n. 1), 183-185.

¹⁶This was to reduce expenses, since the CRS paid the expenses of the Board when they attended the annual meeting. Wayne Frair, "Minutes of the 1985 Board of Directors Meeting," **CRSQ** 22 (December, 1985) 137-140.

¹⁷Morris, **History of Modern Creationism** (n. 1), p. 184.

to the Board come from the Board itself, though there is a constitutional provision which allows the membership to nominate an individual by submitting a petition signed by twenty-five voting members.¹⁸ Those elected to the Board have always been voting members who have published in the Society's journal, **The Creation Research Society Quarterly**.¹⁹ All voting members are eligible to cast mail ballots for the Board nominees, but only about one-third of those eligible vote on the nominees, approving or rejecting them. The published Minutes of the Board Meetings do not indicate that any nominee of the Board has ever been rejected or replaced by a write-in candidate.²⁰

The Board held its first annual meeting at Concordia Junior College in Ann Arbor, Michigan.²¹ This association with Concordia, a Lutheran school, was strictly informal. Paul Zimmerman, a member of the first Board, was then President of Concordia and offered the school's facilities to the CRS for their meetings. They accepted his offer and have always held their meetings on the campus. Initially the Board meetings were closed to the public, but in 1979 the Board opened the Friday evening session to the public.²² During this session general reports are given, papers are read, and various issues are discussed. This is the closest the Society comes to holding an

¹⁸Voting Members are those who subscribe to the Society's "Statement of Belief" and have an earned graduate degree in one of the natural sciences. See below, p. 38-42, for details on membership.

¹⁹Wilbert Rusch, "A Brief Statement of the History and Aims of the CRS" (n. 6), pp. 149-150. See below, pp. 62-112, for the details of the journal.

²⁰The Minutes of each Board Meeting have been published in the **CRSQ** since 1966. Occasionally the Minutes would refer to a few write-in votes, but never enough to challenge any nominee. See, for example, William Tinkle, "Report of the 1973 Board Meeting," **CRSQ** 10 (September, 1973) 124-125.

²¹Due to the inability of Board members to coordinate their schedules, no Board meeting was held in 1964. The first meeting was in March, 1965. Since then the Board has held its annual meeting every April. Henry Morris, **History of Modern Creationism** (n. 1, p. 34), 188.

²²"Notice of Open Meeting," **CRSQ** 16 (December, 1979) 151.

annual meeting of the whole Society. The CRS has never held a regular convention or conference, and there is no indication (as of 1989) that it will in the future.²³

The Minutes of the 1986 annual meeting offer a good example of the events of an annual meeting. Friday evening at 7:00 President Wilbert Rusch called the meeting to order and the group stood for silent prayer. Fourteen Board members and seventeen visitors were in attendance. The Secretary named the five men elected to the Board. Various reports were read, including the treasurer's report, research project reports, and the editor's report. The group then adjourned at 9:30 P.M. Saturday the closed meeting began at 8:30 A.M. during which the regular CRS business session was conducted. They allocated money for research projects and approved specific matters relative to the Finance Committee. The Board then approved the nominations for next year's Board, and set the number of Board Members at fifteen. The incumbent officers were re-elected, the date for the next meeting was set, and the group adjourned at 2:35 P.M.²⁴

Of the thirty-two men who have served on the Board since the group's inception, fourteen have been on it for fifteen years or more.²⁵ Two members of the current (1987) Board are charter members: Duane Gish and Wilbert Rusch. The average length of service for all thirty-two members is twelve years, indicating the stability and continuity of the Board.

²³Editor Emmett Williams indicates that this is due to three considerations: lack of financial resources, lack of manpower, and the goal of the CRS, which is to direct all resources to research and publishing. "Editorial Comments," **CRSQ** 23 (March, 1987) 141.

²⁴David Kaufmann, "Minutes of the 1986 Creation Research Society Board of Directors Meeting." **CRSQ** 23 (March, 1987) 171-173.

²⁵Appendix A, pp. 195-197, lists all who have served on the Board of the Creation Research Society.

Offices

The 1963 "Steering Committee" established three Society offices, President, Secretary, and Treasurer, which the Board elects from its members. The Editor of the Society's journal is appointed by the Board. In 1985 the Board limited the Editor's time of service to five years with no consecutive reappointment.²⁶ No similar limits have been placed on the other offices. The first Board elected Lammerts as President and also appointed him the first editor of the **Quarterly**. They also elected William J. Tinkle as the first secretary, and Wilbert H. Rusch as treasurer. For the first five years of the Society's existence Lammerts served as both President and Editor, the only time one person filled two offices simultaneously.

Today the Society has five offices: President, Vice-President, Secretary, Membership Secretary, and Treasurer. In 1966 the office of Vice-President appeared for the first time in the list of CRS officers, but the published minutes of the 1966 Board meeting say nothing about the addition.²⁷ The office of Membership Secretary was added to the list of officers in 1968.²⁸

Due to the increasing membership, Wilbert Rusch was unable to maintain the group's records on his own time and from his own office. So, in 1968, the CRS rented office space from Concordia Junior College and employed a secretary half-time.²⁹ Rusch himself drew no salary, for in 1965 the first Board of Directors had established the policy that no officer was to be paid for his services, and the CRS has continued

²⁶Wayne Fratr, "Minutes of the 1985 Board Meeting" (n. 16), pp. 137-140.

²⁷William Tinkle, "Report of the 1966 Board of Directors Meeting," **CRSQ** 3 (July, 1966) 21-22.

²⁸ The minutes of the 1968 Board meeting simply note the addition without explaining it. William Tinkle, "Report of the 1968 Board of Directors Meeting," **CRSQ** 5 (September, 1968) 91. Also see Henry Morris, "Comments from the President," **Ibid.** 43.

²⁹**Ibid.**

that policy to the present.³⁰ Since 1975, however, the Society has paid Board members' expenses when they attend the annual meetings.³¹

The CRS has had six Presidents:

1963-1967	—	Walter E. Lammerts
1967-1973	—	Henry M. Morris
1973-1977	—	Thomas G. Barnes
1977-1983	—	George F. Howe
1983-1986	—	Wilbert H. Rusch
1987-	—	Wayne Frair

All of these except the current President, Wayne Frair, were either charter members of the Board or were elected to it within its first three years.

Five men have served as Editor of the **Quarterly** :

1963-1968	—	Walter E. Lammerts
1968-1973	—	George F. Howe
1973-1983	—	Harold L. Armstrong
1984-1988	—	Emmett L. Williams
1989-	—	Donald B. De Young

Lammerts and Howe were long-term members of the Board while Armstrong and Williams were elected to the Board in 1970. The Editor oversees the **Quarterly** with the help of an Editorial Board which he appoints. The size and membership of this Board is up to the Editor. They help in selecting papers for publication, assigning referees to read them, and producing the **Quarterly**. Since this journal is the Society's major contact with members and non-members, the Editor's work is extremely important.

Membership

The "Steering Committee" initially established two levels of membership: voting and sustaining. Voting members are those who have a Master's or Ph.D. degree in the natural sciences and who can sign the Statement of Belief. These are the only

³⁰Morris, **History of Modern Creationism** (n. 1), p. 187. Appendix B, p. 199, lists all those who have held office in the Creation Research Society.

³¹Wayne Frair, "Minutes of the 1975 Board of Directors Meeting," **CRSQ** 12 (September, 1975) 118-119.

members who may vote in the annual election of Board members. Sustaining members are those who do not meet the academic requirements but who agree with the Statement of Belief and wish to support the work of the Society.

A third category, Student Membership, began in 1968, but was not formally included in the constitution until 1971.³² Dues for Student Members have always been less than those of the Voting and Sustaining Members.³³ In 1975 the CRS added a "Fellow" class to the membership categories.³⁴ In 1980 another category, "Senior Citizen Membership," was established for those over sixty-five.³⁵ Senior members paid the same dues as Student members. Since 1966 the Society has offered annual subscriptions to the **Quarterly** for those who did not wish to become members, such as institutions or individuals who do not wish to join the Society but still receive the journal.³⁶ In 1984 the Board added this "Subscriber" category to the constitution. That same year they also established a "Life Membership" category. Anyone qualified to be either a Voting or Sustaining Member and who pays a one-time fee (the amount to be set by the Board) into the CRS Endowment Fund is granted Life Membership

³²"Constitution of the Creation Research Society," **CRSQ** 8 (September, 1971) 151-152. Student membership first appears on the CRS application form in 1973, but there is no reference to the establishment of Student Membership in any of the published Board Minutes until 1985. Then it was included in a list of proposed constitutional changes in membership categories. Wayne Frair, "Minutes of the 1985 Board Meeting" (n. 16), pp. 137-140.

³³**Ibid.** In 1988 the Board increased the dues to Voting and Sustaining Members: Regular - \$17, Senior - \$12, Student Member - \$12, Subscriber - \$20, and Life Member - \$300. David Kaufmann, "Minutes of the 1988 Creation Research Society Board of Directors Meeting," **CRSQ** 26 (December, 1989) 128-129..

³⁴Fellows have the same status as voting members but pay no dues. Wayne Frair, "Report of the 1975 Board of Directors Meeting," **CRSQ** 12 (September, 1975) 118-119. John Grebe, Walter Lammerts, and William Tinkle were the first members elected to this position.

³⁵Wayne Frair, "Report of the 1980 Meeting of the Board of Directors Meeting," **CRSQ** 17 (September, 1980) 134-136.

³⁶Wayne Frair, "Report of the 1984 Meeting of the Board of Directors," **CRSQ** 21 (December, 1984) 151-152.

without additional dues.³⁷ There is no published information of how many Life Members are in the Society.

While some of the membership statistics of the Society are available from the organization, the membership list is not. The Society feels that individual members may be discriminated against if their creationist position is known. Board members are identified, but the individual members have the choice of making their association with the Society a public or private matter.³⁸ Even the authors of the papers published in the **Creation Research Society Quarterly** usually are not identified by academic or professional associations. The normal identification is to give only the mailing address of the writer.

The Creation Research Society has never been a large group. It did experience steady growth from its founding in 1963 to 1979 when its total membership reached a maximum of 2,295 members, including foreign members.³⁹ From 1980 to 1985, however, the group lost about 1000 members. The CRS gave no explanation of this loss, but several reasons suggest themselves. First, the decrease followed several legal setbacks for creationist efforts to introduce recent-creationism into public school curricula. Creationism may have lost some of its appeal after 1980. Second, the Society's **Quarterly** continued to publish more technical articles. This probably caused some sustaining members to drop membership in the group. Since 1985 the membership

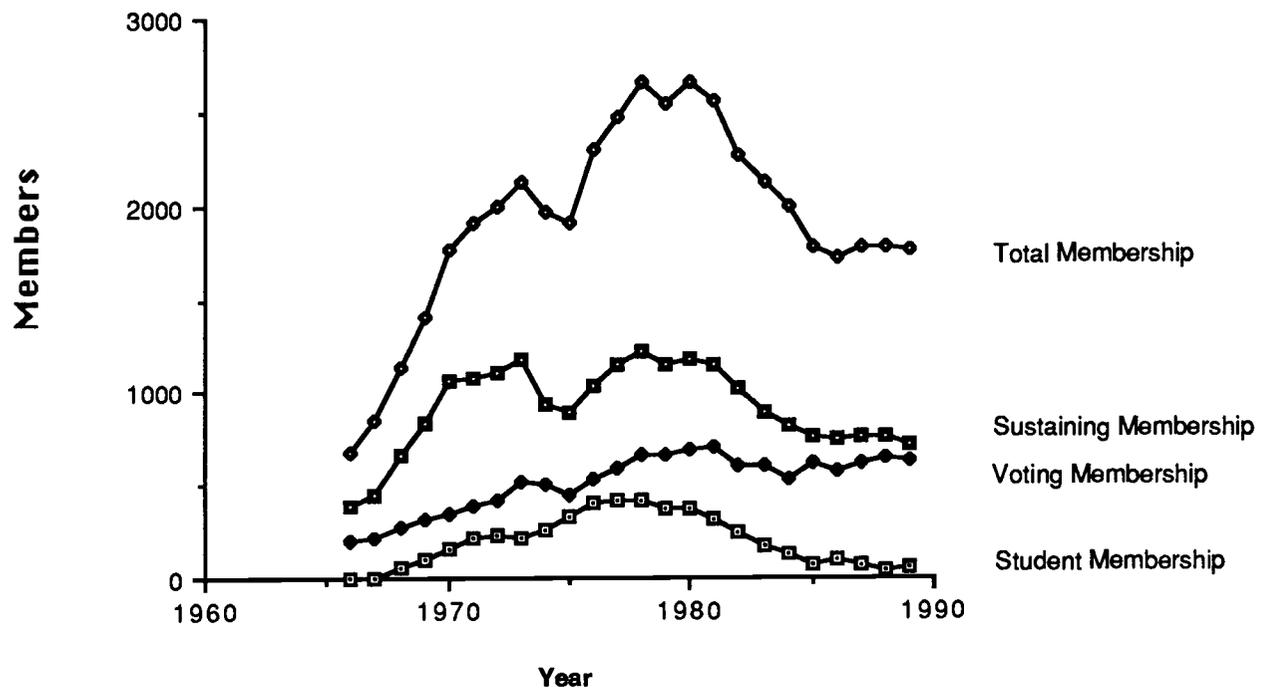
³⁷Initially the fee was \$250; it was increased to \$300 in 1988. David A. Kaufmann, "Minutes of the 1988 Board of Directors Meeting" (n. 33), 128-129.

³⁸Morris, **History of Modern Creationism** (n. 1), p. 187.

³⁹This and other membership data come from official "Creation Research Society Membership Reports" provided to the author by Wilbert Rusch, the past President, and Wayne Frair, the current President, personal communication, November 9, 1987. The CRS has listed foreign membership as a separate category only four times: 1984-380, 1985-223, 1986-277, and 1987-278.

has stabilized around 1800. The 1989 membership was 1,764.⁴⁰ An analysis of membership statistics gives the following picture:

Figure 1 - Membership Categories



During the last four years the Society's total membership has stabilized around 1800. Voting membership peaked in 1982 at 701 and fell to 531 in 1985. Since then it has risen to 635 as of 1989. The highest number of sustaining members was 1,221 in 1979, but in 1989 there were 723 sustaining members. Student membership reached a high in 1979 of 417 but has since fallen to 53 in 1989. The drop in this last category is especially significant. If the Creation Research Society cannot attract students, then one might predict that fewer of the graduating scientists will be attracted to the CRS and the membership will decline.

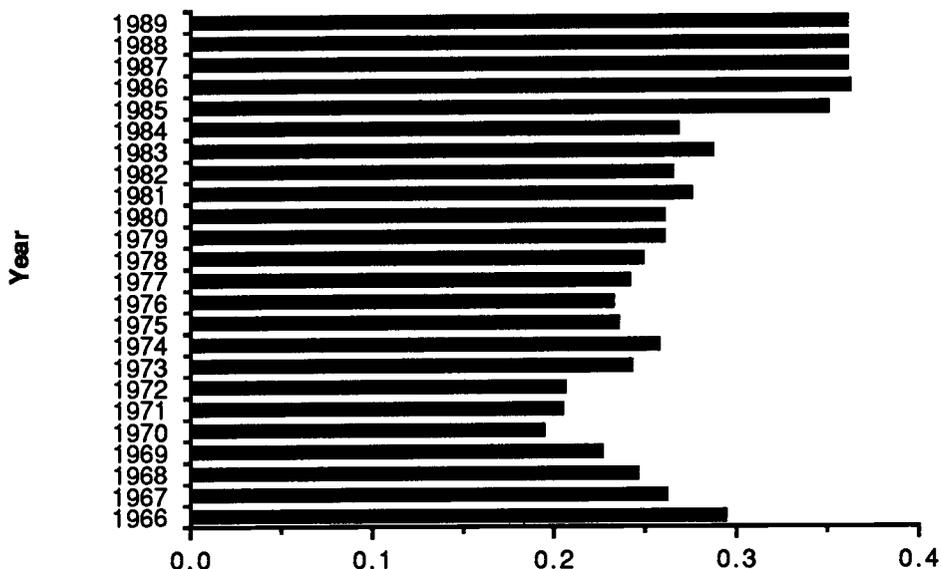
⁴⁰David Kaufmann, "Minutes of the 1988 Creation Research Society Board of Directors Meeting" (n. 33), 128-129. In addition to Student, Voting and Sustaining members, the Total Membership data include Subscribers and foreign members.

Public interest in creationism and membership in the CRS seem to go together. Creationism was an especially newsworthy item in 1980 with the passage of the "equal time" law in Arkansas and the resulting court test.⁴¹ Such a connection would be difficult to document, but the drop in total membership after the rejection of the Arkansas statute seems to indicate less interest in and commitment to creationism by the general public.

While the CRS may be called a scientific society because scientists control the group through its Board, the Society's membership statistics demonstrate that it is more of a popular group. The largest segment of its audience is the Sustaining Members, those without advanced scientific degrees. However, the total number of such members is gradually decreasing. In fact, the only portion of the CRS audience to increase is the Voting Membership. In 1977 the percentage of this group began to increase, which may indicate that the membership of the CRS is becoming more technically-oriented as it becomes smaller. If the percentage of voting members continues to increase, the Society may lose its general audience. Though increasing, the Voting Membership has always been less than half of the total membership. The usual ratio is around one-third, as the following graph shows.

⁴¹Langdon Gilkey, **Creationism on Trial: Evolution and God at Little Rock** (Minneapolis: Weston Press, Inc., 1985).

Figure 2 - Voting Membership Ratios



Finances

The Society's three sources of income are membership dues, book sales, and contributions. Initially the "Steering Committee" set dues at \$5.00 per year for voting and sustaining members. In 1989 annual dues were \$17.00 for Voting and Sustaining Members, \$12.00 for Seniors and Student Members, and \$20.00 for Subscribers. The Society has published or has sole distribution rights to eight books.⁴² In 1986 sales of these books produced \$1633 of income.⁴³ Figures for total books sold are also incomplete, but the published figures are:⁴⁴

⁴²In 1979 the Society started its own publishing organization, CRS Books. Wayne Frair, "Report of the 1979 Board of Director's Meeting," **CRSQ** 16 (September, 1979) 141. See below, pp. 113-135, for a description of these books

⁴³Wayne Frair, "Report of the 1984 Board of Directors Meeting," **CRSQ** 21 (December, 1984) 151-152 and David Kaufmann, "Report of the 1987 Board of Directors Meeting," **CRSQ** 23 (March, 1987) 171-173.

⁴⁴These figures are published in the minutes of the Board meetings of the given year. No sales figures were given for 1986 and 1987.

1980	268
1983	408
1984	467
1985	736
1986	—
1987	—
1988	911
1989	—

Contributions from private donors are a third source of CRS funds. Although no data is available on the amount provided by or the number of individual contributors, it appears that there are no wealthy patrons operating behind the scenes. In 1973 William Tinkle wrote, "I have been Secretary of the Creation Research Society since its founding in 1963 and have not known a single rich or powerful patron."⁴⁵ The CRS has regularly solicited contributions from its membership for its research projects and for the construction of a creationist research laboratory.⁴⁶ Apparently many have responded, for in 1986 enough money was transferred from the Laboratory Fund to the Research Fund to make the latter's total \$15,000. The Research Committee was also authorized to borrow up to \$15,000 from the Laboratory Fund for capital expenses.⁴⁷ Although the totals in individual funds are not part of the published minutes, these numbers indicate a significant amount of contributions.

Only summary financial statements have been published:⁴⁸

⁴⁵William J. Tinkle, "Letter to the Editor," **Science** 179 (March 9, 1973) 954.

⁴⁶As early as 1966 the Board gave its approval to efforts to solicit funds for research; William Tinkle, "Report of the 1966 Board of Directors Meeting," **CRSQ** 3 (July, 1966) 21-22.

⁴⁷David Kaufmann, "Minutes of the 1986 Creation Research Society Board of Directors Meeting," (n. 24), 171-173.

⁴⁸No explanations were published for the obvious discrepancies, such as the increase in the 1973 balance when reported expenses exceeded income by \$3225.88 or the sudden increase in the balance for 1974. No specific figures were published for 1986. The 1987 estimate came from Treasurer John Meyers. David Kaufmann, "Minutes of the 1987 Board of Directors Meeting," **CRSQ** 24 (December, 1987) 134-136.

	<u>Income</u>	<u>Expenses</u>	<u>Balance</u>
1967	—	—	2,512.21
1968	—	—	4,853.00
1973	20,163.67	23,389.55	8,198.06
1974	36,344.08	23,706.54	32,806.41
1975	27,334.26	21,980.92	38,159.75
1976	28,011.29	25,164.17	41,006.87
1977	—	—	—
1978	—	—	—
1979	—	—	53,676.49
1980	42,195.75	45,788.34	50,093.90
1981	48,843.94	38,992.64	59,944.64
1982	75,328.84	51,217.51	84,055.97
1983	85,879.56	66,403.12	118,532.41
1984	76,891.85	62,408.98	133,015.23
1985	69,938.90	53,826.49	137,454.92
1986	—	—	—
1987	—	—	“Over \$250,000.00”
1988	99,759.00	92,840.00	245,987.00
1989	89,612.00	55,463.00	285,824.00

Data for the missing years were not published in the Minutes of the Board meetings.

By 1972 membership dues were insufficient to support publication of the **Quarterly** out of the General Fund, so the Board, to keep the dues as low as possible, authorized the solicitation of private contributions to help pay for publication.⁴⁹ Apparently this was temporarily successful. In 1984, however, the Editor reported that printing costs of \$100 per page had forced him to negotiate with authors over voluntary page charges.⁵⁰ In 1986 the Treasurer was authorized to borrow from the Life Membership Fund, the Reserve Fund, and the Book Fund to meet the obligations of the General Fund.⁵¹ This internal borrowing has continued, for in 1987 the Board authorized the Treasurer to borrow up to \$5000 from other funds to meet immediate needs,

⁴⁹Henry Morris, “Preliminary Report of the [1972] Board of Directors Meeting,” **CRSQ** 9 (June, 1972) 67.

⁵⁰Wayne Frair, “Report of the 1984 Board of Directors Meeting” (n. 42), pp. 151-152.

⁵¹David Kaufmann. “Minutes of the 1986 Creation Research Society Board of Directors Meeting” (n. 24), 171-173.

and in 1988 the limit was increased to \$10,000.⁵² Further, the per page charges of “\$50 per page in Volume 23, \$75 per page in Volume 24, and \$100 per page in Volume 25 and following volumes” were to be paid out of the Research Fund when the **Quarterly** publishes research reports of Society-sponsored work.⁵³ Unless its circulation increases dramatically or a new source of financial support is located, such shifting of monies into the General Fund to support the publication of the **CRSQ** will probably continue. The CRS may have to choose between maintaining the **Quarterly** or its research program, since its income is apparently not sufficient to support both.⁵⁴

Throughout its twenty-seven years, the Society has not changed its structure, goals or operation. It still pursues the same goals established by its founders, and neither the Board nor the Constitution have been substantively changed. This does not mean that there have been no problems for the Society, but it does mean that the CRS has not deviated from its original course nor altered its basic mode of operation.

Operational Problems

The Creation Research Society has faced a number of major problems during its quarter-century existence. Some have concerned the Board itself while others were caused by groups outside the CRS. Difficulties within the Board surfaced within the first few years of the Society's operation and caused two of the initial Board to resign.

⁵²David Kaufmann. “Minutes of the 1987 Creation Research Society Board of Directors Meeting.” **CRSQ** 24 (December, 1987) 136-137. David Kaufmann. “Minutes of the 1988 Creation Research Society Board of Directors Meeting” (n. 33), 128-129.

⁵³David Kaufmann. “Minutes of the 1986 Creation Research Society Board of Directors Meeting” (n. 24), p. 173. Craig Wilson, Assistant Director of Collection Management of the Kerr Library of Oregon State University indicates that charging authors to publish papers is “very common” for publications of societies and associations, but less common for major publishers. Societies and Associations use the page charges to offset the cost of publication, thus keeping their subscription rates low. Major journals usually pass on their costs to the subscriber in the form of higher subscription rates. Craig Wilson, personal letter, May 23, 1988.

⁵⁴See below, pp. 136-140, for details of the Society's research program.

One of the first problems that the Board confronted was caused by the omission of any reference to the date of creation in the Statement of Belief. Most Board members agreed with Henry Morris that creation occurred about 10,000 years ago.⁵⁵ Although some regarded this as a relatively minor issue in light of the larger creation-evolution question, it was a major one for Morris. Unfortunately he had missed the 1963 organizational meeting where the "Statement of Belief" was molded and cast in constitutional cement.⁵⁶ At the next Board meeting in April, 1965, he lobbied long and hard to get the Board to make an official commitment to recent-creationism.⁵⁷ Most, but not all the Board agreed with him, so Morris did win a significant concession. The Board went on record that no CRS publication would ever advocate an "old earth" position.⁵⁸

Founder R. Laird Harris, an archaeologist and Professor of Old Testament at Corcordia Theological Seminary, St. Louis, Missouri, disagreed with Morris over this issue. Harris argued that the "days" of Genesis 1 may have been long periods of time, thus creation may have occurred millions of years ago.⁵⁹ This did not sit well with Morris and in April, 1965, he wrote to Lammerts, questioning the suitability of Harris

⁵⁵Henry Morris fully develops his position in **The Genesis Record: A Scientific and Devotional Commentary on the Book of Beginnings** (Grand Rapids: Baker Book House, 1976), p. 46.

⁵⁶The Statement of Belief is the only part of the Society's Constitution that cannot be amended. "Constitution of the Creation Research Society," **CRSQ** 3 (May, 1966) 3.

⁵⁷Due to the Board's inability to coordinate schedules, no meeting was held in 1964. Morris, **History of Modern Creationism** (n. 1), p. 182, 191-192.

⁵⁸*Ibid.*, p. 192. Lammerts concurred with this action, having stated that the concept of a young age for both the earth and the universe was an official "unwritten" concept for the Society. Lammerts, "Early Steps in Formation of Creation Research Society," **CRSQ** 12 (March, 1976) 213.

⁵⁹Later R. Laird Harris gave a detailed explanation of his position in **Inspiration and Canonicity of the Bible** (Grand Rapids: Zondervan Publishing House, 1969), p. 31. Morris's objections to this position were stated in "The Day-Age Theory," **CRSQ** 8 (June, 1972) 269-272.

as a Board member because of he did not support recent-creationism.⁶⁰ Harris made no offer to change his position. Instead, in May of that year he offered his resignation from the Board which Lammerts reluctantly accepted, thus avoiding a difficult confrontation.⁶¹

However, there were still those in the Society who did not hold the recent-creation view. One of these, Wayne Frair, professor of biology at Kings College, Briarcliff, New York, is currently (1989) the group's President.⁶² Frair's election as President is probably due more to his gracious refusal to argue the point than to a change in opinion of the Board. There is no doubt that he is in the minority and that, for all practical purposes, the Creation Research Society is committed to recent-creationism.

Another internal difficulty involved Frank Marsh, one of the original "Team of Ten." He was a dedicated Seventh-day Adventist, committed to the denomination's belief that Saturday was the Sabbath, the divinely-ordained day of rest. Out of respect for Marsh's conviction the CRS Board held their annual meeting on Sunday. But in April, 1969, the Board voted to meet on Saturday since the Sunday meeting was inconvenient for the majority. The motion was passed unanimously, with Marsh absent from the meeting.⁶³ Marsh immediately resigned from the Board and in July of

⁶⁰Henry Morris, letter to Walter Lammerts, April 28, 1965, University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection.

⁶¹Harris's letter was firm, yet cordial. There were no hard feelings on either side. Letter from Lammerts to Harris, May 5, 1965, University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection.

⁶²Wayne Frair speaks of coal having been formed "60,000,000 to 20,000,000 years ago" in "The Human Skull Composed of Coal," *CRSQ* 5 (March, 1969) 134. Immediately preceding Frair's paper is a column by CRS President Henry Morris which speaks of Frair's work as "marred by this same implicit acceptance of the standard geologic ages," in "Comments from the President," *Ibid.*, p. 132, 147. William Duke, "The American Scientific Affiliation and the Creation Research Society" (n. 8, p. 33), pp. 120-126 gives additional details of this internal debate.

⁶³Morris, *History of Modern Creationism* (note 1), pp. 195-196.

that year sent Lammerts and Morris a strongly-worded letter, protesting the Board's decision and reaffirming his resignation.⁶⁴

The only other Seventh-day Adventist on the Board was Clifford Burdick and, although he accepted the Saturday meetings, Burdick became another cause of concern for the CRS. In September, 1963, Lammerts invited him to become part of the initial Board of the CRS.⁶⁵ Burdick accepted, and in his letter detailed problems he was encountering with his work at the University of Arizona. Burdick was working toward a Ph.D. in geology at the university and had encountered opposition from his dissertation committee because, he claimed, of his creationist views. Burdick asked Lammerts and others on the Board to intercede on his behalf. Correspondence between Burdick and Lammerts over this issue continued for over a year. Some Board members, including Lammerts, were not convinced that Burdick was correct in his assessment of the situation.⁶⁶ However, he persisted in asking for help, so Lammerts eventually wrote a letter to Burdick's major professor, Dr. Willard Lacey of the University of Arizona Geology Department. He asked that Burdick's work be given "reasonable consideration," but Lammerts was unsuccessful in persuading Lacey to let

⁶⁴Marsh sent Lammerts letters concerning this on July 1 and 6, 1969. On July 14 Lammerts received a letter from Morris with a copy of Morris's letter to Marsh, accepting his resignation with regrets. These letters are in University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection. His resignation was announced in June. William Tinkle, "Minutes of the 1969 Board Meeting," *CRSQ* 6 (June, 1969) 112-113. The bitterness passed on both sides, for the twelfth Annual issue of the *Quarterly* was dedicated to Marsh: Editorial, "Frank L. Marsh," *CRSQ* 13 (June, 1976) 3-4.

⁶⁵Walter Lammerts, letter to Clifford Burdick, September 17, 1963, University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection.

⁶⁶In a letter to Rusch, Lammerts termed Burdick's expectations of his professors "unreasonable." Walter Lammerts, letter to Wilbert Rusch, December 12, 1963. Later Lammerts worked with Burdick on several of his *Quarterly* papers. In another letter to Rusch Lammerts commented on Burdick's remarkable ineptitude as a writer. Walter Lammerts, letter to Wilbert Rusch, February 10, 1966. Both letters are in the University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection.

Burdick continue in the program.⁶⁷ Ultimately Burdick gave up his efforts and dropped out of the University's Ph.D. program. But he did not give up his desire for a doctorate.

For the next two years Burdick and Lammerts corresponded about Burdick's claims that he had found fossil pollen from vascular plants in Cambrian and Precambrian rocks in the Grand Canyon.⁶⁸ Burdick made no mention of his doctorate situation in any of these letters until 1967 when he announced that he had transferred his University of Arizona credits to the "University of Physical Science" in Phoenix, Arizona, and they had granted him a Ph.D. In March of that year Lammerts wrote to Morris, who was then CRS President, questioning the validity of Burdick's Ph.D.⁶⁹ Others on the Board shared Lammerts' concern and apparently asked Burdick some direct questions, for early in 1969 Lammerts wrote to Burdick, accusing Burdick of misquoting him to other Board members.⁷⁰ Rusch also questioned the situation and told Lammerts that there was no institution called the University of Physical Sciences listed as an approved, degree-granting school.⁷¹ It seemed that Burdick's Ph.D. had come from a "degree mill." Lammerts knew that if

⁶⁷Lammerts wrote to Lacy in March, 1964, and sent Burdick a copy of that letter on April 8, 1964. On May 4, 1964, Lammerts wrote Burdick, advising him that no more help could be given him. Letters are in University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection.

⁶⁸This work resulted in one major paper: Clifford Burdick, "Microflora of the Grand Canyon," *CRSQ* 3 (June, 1966) 38-50. See below, pp. 95-96, for further details of this work.

⁶⁹Walter Lammerts, letter to Henry Morris, March 8, 1967, University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection.

⁷⁰Walter Lammerts, letter to Clifford Burdick, April 29, 1969, University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection.

⁷¹Henry Morris, letter to Clifford Burdick with a copy to Lammerts, May 9, 1964. Rusch also wrote to Lammerts questioning all of Burdick's work, including his M.S. in geology from the University of Wisconsin, April 29, 1969. On May 13 Rusch forwarded letters to Lammerts from the Arizona Department of Education showing that no such organization was recognized by the state. Letters are in University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection.

the CRS accepted this degree as genuine the credibility of the CRS as a professional organization would be compromised. In a letter to Morris he raised the possibility of asking Burdick to resign from the Board.⁷²

In August, 1969, Lammerts received a letter from Dr. W. A. Rhodes, President of the University of Physical Sciences who explained that the "University" was a group of "professional" men who organized themselves to grant academic honor to those overlooked by regular institutions. They did this by granting academic degrees, such as Burdick's Ph.D.⁷³ Morris, Lammerts and others on the Board finally agreed to keep Burdick on the Board, but to list him as having a Masters degree, without specifying his major, rather than the doctorate.⁷⁴ He did have such a degree, but from Emmanuel College in Michigan, not from the University of Wisconsin, as Burdick and Morris claimed.⁷⁵ Burdick had taken some geology classes at Wisconsin, but he never completed his degree there.⁷⁶

The major issue Burdick's situation raised for the Board was credibility, not only Burdick's but that of the CRS as a whole. The fact that the Board would consider

⁷²Walter Lammerts, letter to Henry Morris, May 16, 1969, University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection.

⁷³W. A. Rhodes, President of the University of Physical Sciences, letter to Walter Lammerts, August 9, 1969, University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection.

⁷⁴Burdick was off the Board for a brief time during this period. Henry Morris, **History of Modern Creationism** (n. 1), p. 203.

⁷⁵Emmanuel College is no longer in existence. Burdick graduated from there in 1929. *Ibid.*, p. 184-185. Allen M. Solomon and Ralph A. Morgan, "Challenge Taken Up," **Geotimes** 18 (June, 1976) 9-10, identified Burdick's Master's degree as an M.A. in "a ministerial curriculum." Burdick stated that "I did my master's work in geology at the University of Wisconsin." C. L. Burdick, "Grand Canyon Palynology," **Geotimes** 18 (October, 1973) 15-16. The comments of Morris are found in his **History of Modern Creationism** (n. 1, p. 34), p. 184-185.

⁷⁶Information on Burdick's University of Wisconsin work came from Dorothy Weidner, Registrar's Office, University of Wisconsin, personal letter, February 11, 1988.

dismissing one of their members in order to maintain the group's credibility indicates the seriousness with which these men viewed their purpose.

Another area of internal disagreement between Board members was the issue of whether or not the Society should be more aggressive in support of creationism. Again Henry Morris was involved. In 1964 he wrote to Lammerts, urging the Society to take a more active public stand to promote recent-creationism.⁷⁷ For Morris this meant public debates with evolutionists, but Lammerts was not convinced, even after he witnessed a creationism debate at the 1965 meeting of the Indiana (Lutheran) Parish Teachers Association. Paul Zimmerman and John Klotz, two Lutheran teachers and CRS members, debated two evolutionary biologists from Valparaiso University, a Lutheran school. In November of that year Lammerts wrote that "the debates were a waste of time," and two months later he told a fellow creationist that he hoped Society members will quit debating.⁷⁸

Morris, however, felt that such debates were an effective way to "try to win the scientific and educational worlds back to Christ and creationism."⁷⁹ Indeed, his desire for a more active role in furthering creationism led him to make a major career change. In 1970 he left Virginia Polytechnic Institute to help start Christian Heritage College and the associated Creation-Science Research Center in San Diego.⁸⁰ From

⁷⁷Henry M. Morris, letter to Walter E. Lammerts, November 26, 1964, University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection.

⁷⁸Walter E. Lammerts, letters to Walter Lang, November 11, 1965, and January 2, 1966, University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection.

⁷⁹Morris gives a detailed explanation of his views in **History of Modern Creationism** (n. 1), p. 197.

⁸⁰Details of this and other creationist organizations are found in Ronald Numbers, "The Creationists," in David Lindberg and Ronald L. Numbers, editors, **God and Nature: Historical Essays on the Encounter Between Christianity and Science** (Berkeley, California: The University of California Press, 1986), p. 411, and in Morris, **History of Modern Creationism** (n. 1), 235-272.

this base he, Duane Gish, another CRS Board member who joined him in 1971, and other CRS leaders have carried out a major program of public debating to further creationism. Although Morris and Gish maintained their association with the CRS while working in the Creation-Science Research Center, the Society continued its refusal to participate in any such activities.

While the Board was wrestling with these internal problems they also faced a challenge to the CRS's commitment to complete independence from other groups. This came from another creationist organization, the Bible-Science Association. This group was started by the Reverend Walter Lang, a Lutheran pastor from Caldwell, Idaho, to further creationism among Lutherans. Both Lang and Lammerts had been in contact with Herman Otten, a Lutheran theologian who was actively engaged in opposing what he considered liberal trends in the denomination. When the CRS was officially organized Lammerts notified Otten who, in turn, informed Lang.⁸¹ In 1963 Lang mimeographed a brief newsletter about the founding of the CRS and the influence of theistic evolution in the ASA. He mailed it out to some of his acquaintances and others he felt might be interested. This first newsletter was followed by others and grew into the **Bible-Science Newsletter**, the oldest recent-creationist periodical still published.⁸²

In 1963, Jean Sumrall and Nell Segraves, two active creationists, petitioned the California State Board of Education to "require that textbooks clearly specify that

⁸¹Morris, **History of Modern Creationism** (n. 1), p. 213.

⁸²Morris, **History of Modern Creationism** (n. 1), 213-215. The **Bible-Science Newsletter** is dedicated to "Special Creation, Literal Bible Interpretation, Divine Design and Purpose in Nature, A Young Earth, A Universal Noachian Flood, Christ as God and Man—our Saviour, and Christ-Centered Scientific Research," **Bible-Science Newsletter** Masthead 16 (October, 1978) 10:1. It is now edited by Paul A. Bartz and published in Minneapolis, Minnesota.

evolution is a theory rather than truth.”⁸³ Segraves, a Baptist, and Sumrall, a Lutheran, had received Lang's newsletter and contacted him for information. In 1964 Lang went to Los Angeles where he met with the two women and Paul Hackstedde, another active creationist. As a result of this meeting they organized both the “Bible-Science Association” as a national organization and the Southern California chapter as its first local group. Lang then helped the three organize a creation seminar in Los Angeles that year at which two CRS Board members, Walter Lammerts and Wilbert Rusch, were featured speakers. The scientific presentations of Lammerts and Rusch received more press coverage than the rest of the seminar, so Lang made one of his first goals the union of the new Bible-Science Association with the CRS.

Lang had sent Lammerts a copy of his 1963 Newsletter, and after the 1963 seminar he raised the possibility of combining the two groups.⁸⁴ Lammerts specifically rejected the idea, for the Society's founders intended the CRS to be independent of any other group and still were fully committed to that position.⁸⁵ Other CRS Board members were upset with Lang's efforts and supported Lammerts' refusal.⁸⁶ Lang's insistence ultimately earned him one of Lammerts' few strongly-worded letters in which he emphatically rejected any cooperation between the two groups. An editorial in the **Quarterly** made the rejection official and public.⁸⁷ The CRS had been founded

⁸³Dorothy Nelkin, **The Creation Controversy: Science or Scripture in the Schools** (New York: W. W. Norton & Company, 1982), p. 107.

⁸⁴Walter Lammerts, letter to Walter Lang, August 26, 1963, University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection.

⁸⁵Walter Lammerts, letter to Walter Lang, March 17, 1964, University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection.

⁸⁶On September 10, 1964 Rusch wrote to Lammerts, “Watch out for Lang.” Wilbert Rusch, letter to Walter Lammerts, University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection.

⁸⁷“Statement of Relation Between the Creation Research Society and the Bible-Science Association, Inc.” **CRSQ** 3 (July, 1966) 20-21.

as a scientific society, and Lammerts did not want it to become a mere “propaganda society” for the promotion of belief in the Bible.⁸⁸

Lang still continued his efforts to make the Bible-Science Association the coordinating organization for all recent-creationist activities by trying to get CRS members to submit papers to his **Newsletter** instead of the **Quarterly**. This drew additional editorial fire in 1968 when the **Quarterly** reaffirmed the separation of the two groups and the complete editorial independence of the CRS periodical.⁸⁹ This was Lang’s final effort, and the last time the CRS faced this problem.

A second conflict with another creationist organization developed in 1970 when Henry Morris, then President of the CRS, left Virginia Polytechnic Institute to help found Christian Heritage College. As early as 1966 Morris had written to Lammerts about leaving VPI, and Lammerts had advised him to stay.⁹⁰ Morris was the highest-placed academic on the Board, and his position provided the CRS with a significant amount of respectability. Morris, however, claimed to be coming under increasing pressure from VPI because of his creationist publications.⁹¹ In 1970 when the Reverend Tim LaHaye, Pastor of the large Scott Memorial Baptist Church in San Diego, asked Morris to help start a Christian college which would be committed to recent-creationism, Morris accepted. Initially LaHaye was President of the school

⁸⁸Walter Lammerts, letter to Walter Lang, January 12, 1966, University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection.

⁸⁹“Statement of the Objectives of the Creation Research Society and the Bible-Science Association: Independence of Editorial Responsibility,” **CRSQ** 4 (March, 1968) 119. The CRS Board agreed to let the Bible-Science Association publish articles from the **Quarterly**, provided they obtain specific permission and pay the CRS a royalty fee which would be negotiated for each article. Karl Linsenmann, “Minutes of the 1966 Board of Directors Meeting,” **CRSQ** 3 (July, 1966) 21-22.

⁹⁰Walter Lammerts, letter to Henry Morris, December 6, 1966, University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection.

⁹¹Henry Morris, **History of Modern Creationism** (n. 1), pp. 162-165.

and Morris served as its Academic Vice-President as well as an instructor. In addition to organizing the entire curriculum of the school within a framework of “creationism and full Biblical controls,” LaHaye and Morris also planned to organize a center for creation research as part of the college's functions.⁹²

While LaHaye and Morris were working on the plans for Christian Heritage College the California State Board of Education, in response to pressures from Segraves and other creationists, adopted guidelines which were more favorable to creationist-oriented texts. Nell Segraves and her son, Kelly, leaders of the Southern California Chapter of the Bible-Science Association, started work on creation-oriented science textbooks which would be acceptable under these new guidelines.⁹³ The Segraves needed scientific help with this project and contacted LaHaye and Morris. The two groups then formed the Creation-Science Research Center as a branch of Christian Heritage College. Morris, in addition to his college duties, was the director of the CSRC; Kelly Segraves was the assistant director; and Nell Segraves was its librarian.⁹⁴

During this time Morris was also the President of the CRS, and conflicts of interest between the two groups soon arose. The first such conflict was over the CRS's membership list. Morris had asked the Society's Secretary, Wilbert Rusch, to send this list to him for use in fund-raising for the newly-created CSRC. Rusch refused, since this was a violation of the CRS's stated policy of privacy concerning the members. The list was finally sent when Morris assured Rusch and Lammerts that it would

⁹²**Ibid.**, p. 222-230.

⁹³**Ibid.**, p. 231.

⁹⁴Morris gives additional details of the Creation-Science Research Center in **Ibid.**, pp. 231-234.

be used only for an informational mailing and not fund-raising. But the tensions were not resolved.⁹⁵

A second conflict arose over fund-raising, since both groups were appealing to the same constituency to support the same cause. Some CRS leaders felt they had first claim to such funding since the Society had just published its own biology textbook and was actively seeking additional funds to publish ancillary materials.⁹⁶ Now the Creation-Science Research Center was trying to produce its own creation-oriented science textbooks for public school use, ignoring the CRS text. In 1971 Kelly Segraves sent out a letter requesting contributions for this project. The mailing lists of the CSRC and the Creation Research Society were similar, if not identical, and so were their requests. In May, 1971, Lammerts wrote to Segraves, questioning this intrusion into CRS territory.⁹⁷ Segraves did not respond, and the tensions continued.

The Creation-Science Research Center—Christian Heritage College union dissolved in April, 1972, under the weight of different goals and the acid of personality clashes between the Segraveses (mother and son) and Morris.⁹⁸ The Segraveses kept the CSRC name and records, and their organization still continues to function in the political and promotional areas. Most of the other CSRC staff remained with Christian Heritage College, which replaced the CSRC with a new organization, the

⁹⁵Walter Lammerts, letter to George Howe, April 17, 1971, University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection.

⁹⁶Walter Lammerts, letter to John Klotz, August 21, 1971 University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection, discusses the question of priority. The Society's biology book was John N. Moore, editor, **Biology: A Search for Order in Complexity** (Grand Rapids: Zondervan Publishing Company, 1970). See below, pp. 114-123, for the details of the book.

⁹⁷Walter Lammerts, letter to Kelly Segraves, May 19, 1971, University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection.

⁹⁸Morris discusses the policy differences in **History of Modern Creationism** (n. 1), pp. 223-224; and the personal differences in a letter to Lammerts dated April 25, 1972, University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection.

Institute of Creation Research (ICR), with Morris as its Director. Thus Morris, who had been Academic Vice-President of Christian Heritage College, Director of the CSRC, and President of the CRS, became the director of another creationist organization.

This overlapping leadership and parallel fund-raising efforts were creating problems for the CRS. When the Society published its biology text in 1970 Morris was president of both the Creation Research Society and the Institute of Creation Research. The CRS represented itself as a scientific group, but the ICR was a branch of Christian Heritage College, a religious institution. In 1977 the Indiana Supreme Court ordered the Society's biology textbook removed from the state-approved list of textbooks, judging it to be too religious in content.⁹⁹ Later Wilbert Rusch blamed that decision partially on the fact that Morris had been President of both the CRS and the ICR.¹⁰⁰ The connection via Morris between the ICR and the Society was, in Rusch's opinion, one of the reasons why the Court identified the Society's text as religious in orientation and intent. The judge's decision, however, did not mention this as a reason for rejecting the book as an acceptable text.¹⁰¹ But that was not all. In June of 1972 George Howe, Editor of the **Quarterly**, told Lammerts that the CRS had suffered its first monetary loss.¹⁰² Howe did not directly state it, but he implied that the decline of contributions was due to competition from the CSRC. A year later, in 1973,

⁹⁹For a summary of this effort to get the CRS biology textbook adopted, see "Unequal Time," **Scientific American** 236 (June, 1977) 61. See also Henry Morris, **History of Modern Creationism** (n. 1), p. 199.

¹⁰⁰Wilbert Rusch, personal letter, October 24, 1987.

¹⁰¹The judge cited the fact that the text focused on a creationism obviously founded upon biblical doctrine rather than science, that it criticized evolution without a similar treatment of creationism, and that the teacher's manual required Christian answers to the questions. "Unequal Time," **Scientific American** 236 (June, 1977) 61.

¹⁰²George Howe, letter to Walter Lammerts, June 30, 1972, University of California, Berkeley, Bancroft Library, Lammerts Correspondence Collection

Morris declined to stand for nomination as CRS President although he remained on the Board until 1983 when the increasing workload of the ICR forced him to leave this post as well.

Today (1990) both groups still appeal to the same general constituency, but in different ways. The Society's only public solicitations for funds are the requests for contributions found in its journal.¹⁰³ The ICR, on the other hand, mails out a free newsletter ("Acts and Facts") to any who request it.¹⁰⁴ This newsletter is accompanied with a letter from President Morris describing ICR activities and personally requesting contributions. Both groups have published a number of books for the creationist community, but neither is enjoying financial success in the venture.¹⁰⁵

While there is no public animosity between the groups, neither one gives the other any support. The **CRSQ** makes no reference to the activities of the ICR, nor does the ICR mention the work of the CRS in its publications. There is no open conflict, but neither is there open cooperation between the two. Probably nothing came closer to dividing the CRS Board than the tensions caused by the start of the Creation-Science Research Center, its union with Christian Heritage College, and Morris's leadership role in both while he was the President of the Creation Research Society.

In spite of the problems Morris created within the CRS leadership, a few Board members supported him. Duane Gish, for example, joined him on the CSRC staff in 1972. Two other Board members, Thomas Barnes and John Moore, served on the

¹⁰³See below, pp. 62-112, for the details of this journal.

¹⁰⁴In 1984 the ICR mailing list included over 75,000 addresses. Henry Morris, **History of Modern Creationism** (n. 1), p. 249.

¹⁰⁵Creation-Life Publishers, the publishing arm of the ICR, started in 1974. The ICR limited its publications to creationist books, but the company made no profit. In 1983 its name was changed to Master Books and its publication agenda expanded in an effort to achieve profitability. Henry Morris, **History of Modern Creationism** (n. 1), p. 248. See Chapter 4 below for a discussion of CRS Books, the publishing arm of the CRS, and pp.43-46 for the financial details of the CRS.

CSRC Advisory Board until it separated from Christian Heritage College. All three continued as CRS Board members during this time.¹⁰⁶ Others, such as Lammerts, Howe, and Rusch, were not so supportive. But no one lost his head, made wild accusations, or abandoned ship. The CRS Board handled a difficult situation with aplomb. The Society survived intact and all four organizations, the Creation Research Society, the Creation-Science Research Center, the Institute for Creation Research, and Christian Heritage College, still function today (1990).

Summary

These difficulties and the Board's responses to them illustrate the problems they faced in defining their position and their commitment to maintain it. First, they were willing to remove one of their own to maintain the Society's academic credibility when they found out that his degree was not recognized. Second, the Board held firm to their position of organizational independence, even taking the risk of alienating other creationist organizations. These men were committed to the Society and were willing to do whatever was necessary to maintain their organization as they had envisioned it.

Unlike previous creationist groups, the CRS survived these conflicts by holding firm to their original goals and by placing the interests of the group above their personal preferences. Members have resigned from the Board because of disagreements over CRS position and policies but there has never been a split in the CRS leadership, as some have reported.¹⁰⁷ Today differences of opinion still exist in the

¹⁰⁶Only Gish was on the CRS Board as of 1989. David Kaufmann, "Minutes of the 1987 Board of Directors Meeting" n. 48.

¹⁰⁷Dorothy Nelkin, **The Creation Controversy** (n. 83), p. 79, mistakenly claims that the CRS split into several factions.

Board, especially over the question of geologic ages, but the CRS continues to function.¹⁰⁸

The best evidence of their accomplishments as leaders of the Creation Research Society is the Society itself. It is the oldest creationist organization in the United States, the only society dedicated to the scientific aspects of recent-creationism, and the only group publishing a regular journal on the scientific aspects of creationism. These men faced their share of problems from both within and without the Society, and they solved them without sacrificing the organization. But what has the CRS accomplished in terms of its two basic goals, publishing and research? These are the subjects of the following chapters.

¹⁰⁸See above, pp. 46-48, for the details of the problem of geologic ages.

Chapter 3

THE CREATION RESEARCH SOCIETY QUARTERLY

The founders of the Creation Research Society knew full well the importance of research and publication in the scientific community, but felt frustrated in their efforts to publish creation-oriented papers in regular scientific publications.¹ Consequently in June, 1964, exactly one year following its organization, the Society started its own journal, the **Creation Research Society Quarterly (CRSQ)**.² This journal continues to provide a way for recent-creationists to exchange ideas with one other and to communicate their work to others.

The **CRSQ**, however, reflects the Society's commitment to recent-creationism and the papers it publishes must be read from that viewpoint. The **Quarterly** usually publishes a brief explanation of its purpose in each issue, so the casual reader is able

¹See above, page 36, for the details of this problem from both the creationist and the scientific communities. The importance of publication in appropriate journals is stressed by Kenneth A. Strike, "The Status of Creation-Science: A Comment on Siegel and Hahn," **Phi Delta Kappan** 63 (April, 1982) 555-557. Strike argues that creation-science is not science since its adherents do not publish in recognized, peer-reviewed journals. The two papers Strike evaluated were Harvey Siegel, "Creationism, Evolution and Education: The California Fiasco," **Phi Delta Kappan** 63 (October, 1981) 95-97 and George Hahn, "Creation-Science and Education," **Phi Delta Kappan** 63 (April, 1982) 553-554.

²The **Creation Research Society Quarterly (CRSQ)** is printed in an 8 1/2 x 11 inch size double-column format with easily read type. As is typical with technical journals, illustrations are, except for a few color cover photographs, black-and-white photos or line drawings. Each 4-number volume now averages around 200 pages, consecutively paginated, with an annual index at the end of each volume. Volume 1 had 95 total pages. Consecutive pagination began in 1967 with Volume 4. No cumulative index is available. The **Quarterly** has been indexed in the **Christian Periodical Index** since 1976 and **Biological Abstracts** since 1975. Microfilms of Volumes 17 to the present are available from University Microfilms. Volumes 1-16 have not been micro-filmed.

to quickly ascertain its position and thus correctly interpret its papers.³ Without knowing these underlying assumptions the non-CRS reader is at a loss when it comes to understanding the journal's contents. However, what first appears as scientific nonsense to the reader of traditional journals assumes a coherent shape when these presuppositions are taken into account.

Three major assumptions set the philosophical context for **CRSQ** papers. The first assumption is that the universe has objective reality and consistently operates according to rules, or laws which may be empirically determined.⁴ The Creator is not capricious, nor do his occasional interventions via miracles vitiate the principles by which his creation functions. The CRS also assumes that the first chapters of Genesis are straight-forward history, rather than poetry or myth. These chapters are to be read as a simple narration of historical fact. The Society's final assumption is that the Bible, including Genesis, is divinely inspired and completely accurate. It is, therefore, the final authority in all matters which it addresses. These assumptions are foundational to the Society's creationist position and the key to comprehending the **Quarterly's** papers.

The theological-historical framework in which **CRSQ** writers operate is simply stated. God created the physical universe *ex nihilo* in six 24-hour days. According to the genealogies of Genesis 5 and 10 this event happened in the recent past, probably no more than 10,000 years ago.⁵ God then miraculously intervened in the operation

³This summary states, in part, that CRS members are committed to "a concept of dynamic special creation" based upon the Biblical record of creation, and that they "propose to re-evaluate science from this viewpoint."

⁴This has been discussed in detail by William E. Tinkle, "The Reign of Law" **CRSQ** 13 (June, 1976) 44-46.

⁵This is argued by Richard J. Niessen, "A Biblical Approach to Dating the Earth: A Case for the Use of Genesis 5 and 11 as an Exact Chronology" **CRSQ** 19 (June, 1982) 60-66.

of natural laws by destroying mankind with a world-wide flood, the Noahican Deluge. The waters of this flood covered all the earth's surface at one time, and the entire event lasted over one year. This, then, is the divinely inspired framework within which CRS members operate. It is absolute, immutable, and comprehensive. It is the mold into which they pour all observational data to recast traditional science into an image worthy of the Creator.

The **Quarterly** represents the efforts of a small group of men to re-evaluate science from this theistic viewpoint, and its papers are consistent with the underlying assumptions.⁶ Its writers usually show a respect for observational data, especially that gathered by direct field study. Their assumptions guide the selection of data, but they do not seem to twist the numbers to fit their argument.⁷ **CRSQ** papers, however, are not without their problems. For example, many lack logical rigor in their argumentation.⁸ Others neglect opposing views, ignore the work of others, or assume that a quick reference to the Flood solves all their problems.⁹ Some papers present conclusions that do not logically follow from the data.¹⁰ Not all **CRSQ** papers have

⁶Walter E. Lammerts, "Introduction," **CRSQ** 1 (March, 1965) 1-2.

⁷**CRSQ** papers, for example, look for discrepancies in radiometric dates rather than agreement, since the discrepancies offer support to the Society's recent-creationism. One such paper is John Woodmorappe, "Radiometric Geochronology Reappraised," **CRSQ** 16 (September, 1979) 102-129.

⁸One paper uncritically accepts Plato's description of Atlantis and credits the Deluge with the city's submergence. Clifford Burdick, "Atlantis and the Flood," **CRSQ** 16 (September, 1979), 130-131.

⁹The problems of neglecting opposing viewpoints and ignoring the often-helpful work of others are discussed in detail below, pp. 80-81. In addition to Atlantis, the Deluge has been given credit for continental drift by Mark W. Tippets, "Pangaea Shattered," **CRSQ** 16 (June, 1979) 7-15. Another writer claims that the Flood produced shifts in the earth's magnetic field. Russell Humphreys, "Has the Earth's Magnetic Field Ever Flipped?" **CRSQ** 25 (December, 1988) 120-137.

¹⁰One example of a conclusion not supported by the data presented is a paper on lichens in which the author briefly surveys the difficulty of accounting for this fungus-alga symbiosis from evolutionary assumptions. He then concludes that these difficulties require the abandonment of evolution and the acceptance of creationism.

these problems, but a significant number do. People familiar with traditional scientific papers will note these deficiencies, but they will have far greater difficulty with the theological nature of the Society's work.

Theological Context

As a result of their assumptions the CRS takes a distinctly religious approach to science. Because of their belief in the inerrancy of Scripture, the CRS places the Bible over science as a more authoritative source of information. They reject the idea of science and Scripture as two equal sources of information about God, creation and revelation. Both are sources of truth, but the data of observation must be interpreted in light of Biblical revelation. Emmett Williams, author of several papers on thermodynamics and Editor of the **CRSQ** from 1984 to 1987, illustrated this concept:

Always a creationist study must be guided and undergirded by Biblical considerations. Never can Biblical truth be rejected, disregarded, or explained away.¹¹

The data of Scripture must guide and, if necessary, overrule the theories of science.¹² Thus one **Quarterly** paper rejected Fred Hoyle's concept of "continuous creation," not because of Hoyle's lack of supporting observations, but because, *a priori*, Scripture declares that creation is a completed event (Genesis 2:1 and Exodus 20:11).¹³

One problem does not necessitate the abandonment of an entire point of view, be it creation or evolution. The specific paper is William J. Cairney, "Lichens: A Dilemma for the Evolutionary Model," **CRSQ** 11 (March, 1975) 211-213.

¹¹Emmett Williams, "Resistance of Living Organisms to the Second Law of Thermodynamics: Irreversible Processes, Open Systems, Creation, and Evolution." **CRSQ** 8 (September, 1971) 117-126.

¹²Compare this to the approach of J. Frank Cassel who recounts his shift from a creationist interpretation of Genesis to an evolutionary approach based upon the scientific data. J. Frank Cassel, "The Evolution of Evangelical Thinking on Evolution," **Journal of the American Scientific Affiliation** 11 (December, 1959) 26-27. See above, pp. 22-23, for further discussion of Cassel's situation.

¹³George Mulfinger, "Examining the Cosmogonies: A Historical Review," **CRSQ** 4 (September, 1967) 57-69.

The same paper also rejected the concept of an infinite universe because “God knows the number of the stars” (Psalm 147:4) and if their number is known, then the universe cannot be infinite.¹⁴

Another characteristic of this theologically-based science is that scientific and historical statements of Scriptures are true and should be capable of verification by scientific analysis. So almost every volume of the **Quarterly** contains papers dealing with Biblical subjects.¹⁵ In 1982, for example, Volume 19 contained papers which discussed chromosomal reorganization, the use of Genesis 5 and 10 for dating the Creation, and the building code of the Mosaic Law.¹⁶ Genes, genealogies, and Levitical law, a most unlikely combination by standards of orthodox scientific journals, are equally valid topics for **CRSQ** papers.

Further, scientific and Biblical data must be integrated in any interpretation of the physical world. Geological papers demonstrate this more than any other topic because of the Society's commitment to the historicity of the Noahican Deluge. Almost all extant geological structures are, according to the CRS, the result of the Flood. It explains everything from continental drift to reversals of the earth's magnetic field. The 1979 paper “Pangaea Shattered,” for example, accepts the general concept of continental drift but rejects the time involved for the break-up of Pangaea. This event occurred in connection with the tower of Babel as an isolating mechanism to prevent man “from forming a one-world government,” and was completed within 2000

¹⁴George Mulfinger, “Examining the Cosmogonies: A Historical Review” (note 13).

¹⁵The only volume which does not have at least one specifically Biblically-oriented paper is Volume 24, 1987. See below, pp. 100-102, for a detailed discussion of these and other biblical topics.

¹⁶Walter Lammerts, “Does Chromosomal Reorganization Really Lead to the Origin of New Species?” **CRSQ** 19 (June, 1982) 10-13; Richard Niessen, “A Biblical Approach to Dating the Earth: A Case for the Use of Genesis 5 and 11 as an Exact Chronology,” **CRSQ** 60-66, Moshe Ben-Uri, “The Mosaic Building Code,” **CRSQ** 36-39.

years.¹⁷ Another paper argues that observational data show that the earth's magnetic field has undergone many reversals in the past, but that these events were caused by the Deluge.¹⁸ Thus the Biblical account provides the framework for explaining all geological phenomena. The CRS consistently integrates science and Scripture, provided there is no conflict between the sources. If there is, CRS authors give priority to the literal interpretation of Scripture. The **CRSQ** must be read from this point of view if it is to be properly understood.

The editorial policy of the **Quarterly** is controlled by several theological guidelines. First is Society's Statement of Belief, for no published item, except letters, may disagree with the Statement.¹⁹ The Society's assumptions regarding the Genesis "Days" and the date of creation are the other controlling factors. The **Quarterly's** first editor, Walter Lammerts, officially stated the Society's position on the length of the Genesis days when he argued for the twenty-four-hour interpretation.²⁰ Although the Statement of Belief said nothing about the date of creation, the Board soon went on record that no **CRSQ** papers would advocate the existence of geological ages.²¹ In 1972 the Board made this the official Editorial position by passing a motion that "CRS

¹⁷Mark W. Tippets, "Pangaea Shattered" (note 9), 7-15.

¹⁸Russell Humphreys, "Has the Earth's Magnetic Field Ever Flipped?" (note 9) 120-137.

¹⁹This was an implied limitation until 1985 when the Board passed a detailed statement of Editorial Policy which made this official. Wayne Frair, "Minutes of the 1985 Annual Meeting," **CRSQ** 22 (December, 1985) 137-140.

²⁰Walter E. Lammerts, "Editorial," **CRSQ** 1 (June, 1964) 3.

²¹Henry M. Morris, **History of Modern Creationism** (San Diego, California: Master Books, Inc., 1984), p. 192.

publications shall be consistent with the concept of the Creation Week in relatively recent time.”²²

Finally in 1985 the CRS Board published a complete statement of the Society's editorial policy.²³ Letters to the Editor could advocate any position and would be published at the Editor's discretion. However, no published item, paper, column, or review, would contradict the Statement of Belief. Further, no published paper, column, or review would advocate theistic evolution, progressive creation, or the gap theory.²⁴ This list of proscribed positions effectively committed the Society to a recent creation position and to a twenty-four-hour interpretation of the Creation Days. Although the “Day-Age” theory, the idea that the “days” of Genesis were long periods of time, was not specifically mentioned, it was effectively excluded by the rejection of geologic ages implicit in it.²⁵ Thus the Board made official the editorial policy that the **Quarterly** had, for the most part, followed from the beginning. The **CRSQ** is by no means a general creationist periodical. It affirms that the only consistent creationist view is recent-creationism: the divine creation of the universe in six twenty-four-hour days approximately 10,000 years ago. Other creationist positions are either ignored or discussed only for refutation.

Only two papers have come close to violating this recent-creationist position. One was published in 1969 by Wayne Frair, the current (1987-) President of the CRS, in which he identified a coal bed as having “been formed some time during the Eocene to

²²William Tinkle, “Minutes of the Board of Directors,” **CRSQ** 9 (September, 1972) 145. See above, pp. 46-47, for details of the Board's discussion of this point.

²³Wayne Frair, “Minutes of the 1985 Annual Meeting,” **CRSQ** 22 (December, 1985) 137-140.

²⁴See above, p. 12, for a discussion of theistic evolution and pp. 10-11 for the gap theory.

²⁵Morris's objections to this specific position were stated in “The Day-Age Theory,” **Creation Research Society Quarterly** 8 (June, 1972) 269-272.

Miocene, or 60,000,000 to 20,000,000 years ago.”²⁶ This brought an immediate response from then-president Henry Morris who argued against an ancient earth, stating that Frair's research was defective because of his “acceptance of the standard geologic ages.”²⁷

The second deviation was a critique of a previous paper on the El Capitan Limestone formation in southwestern New Mexico. The original paper attempted to show that this limestone was formed by rapid deposition in recent time and was not a fossil reef.²⁸ The critique summarized evidence, such as masses of algae, sponges, and other organisms as well as banded deposits, which its author interpreted as contradicting the rapid deposition theory. He argued instead for a formation time of “many hundreds of thousands of years.”²⁹ All other papers in the **Quarterly** since 1974 have supported the recent-creation concept.

Analysis of the **Quarterly**

The format, content, and goals of this journal have changed but little since it was first published. Each issue usually contains five parts: introductory comments by the President and/or the Editor, approximately six papers, a regular feature entitled “Panorama of Science,” book and article reviews, letters to the Editor, and an index which lists papers, reviews, and letters . Through 1983 the last issue of the **Quarterly's**

²⁶Wayne Frair, “The Human Skull Composed of Coal,” **CRSQ** 5 (March, 1969) 134.

²⁷Henry M. Morris, “Comments from the President,” **CRSQ** 5 (March, 1969) 132, 147.

²⁸Stuart Nevins, “Is the Capitan Limestone a Fossil Reef?” **CRSQ** 8 (March, 1972) 231-248. The critique was by Daniel E. Wonderly, “Critique of ‘Is the Capitan Limestone a Fossil Reef?’ by Stuart Nevins,” **CRSQ** 10 (March, 1974) 237-241. Also see “Reply to Critique by Daniel Wonderly,” Stuart Nevins, **Ibid.**, 241-244.

²⁹Daniel Wonderly, “Critique of ‘Is the Capitan Limestone a Fossil Reef?’ by Stuart Nevins” (note 28), p. 241.

publishing year was called an "Annual" issue. This number was larger than the other three, for it contained more papers and a combined index for the entire volume. Papers in the Annual issue centered around a single theme such as "The Balance of Nature" for the 1972 Annual or "The Young Earth" for the 1975 Annual.³⁰ In 1984 the Editor eliminated the Annual issue and made all issues approximately the same size.³¹ The fourth issue of each volume, however, is still devoted to a single theme.

Editorials

Unlike other recent-creationist organizations, the CRS does not take official positions on legal, political, or educational matters. Consequently the **Quarterly** rarely publishes a position statement. The few positional editorials have criticized divergent opinions within the Society, discussed the relationship of the CRS to other creationist organizations, and encouraged others who support the CRS's position. In 1966, for example, Walter Lammerts, Editor from 1964-1968, affirmed the commitment of the CRS to a teleological interpretation of science.³² Two years later he defended a reviewer's negative evaluation of a creationist book. The author of the book had rejected the twenty-four-hour interpretation of the Creative Days, and the reviewer strongly objected to this position. Lammerts editorially supported the reviewer.³³ In 1969 the Board instructed William Tinkle, the Society's Secretary, to

³⁰**CRSQ** 9 (March, 1972) and **CRSQ** 12 (March, 1975).

³¹Emmett Williams, "Editorial Comments," **CRSQ** 21 (June, 1984) 4-5.

³²Walter E. Lammerts, "Editorial Comments," **CRSQ** 3 (May, 1966) 1-2.

³³Walter E. Lammerts, "Editorial Comments," **CRSQ** 4 (March, 1968) 119. The book in question was by Donald W. Patten, **The Biblical Flood and the Ice Epoch** (Seattle: Pacific Meridian Publishing Company, 1966)

publish an affirmation of the CRS's independence from other creationist groups.³⁴ The most recent editorial which commented on items beyond the immediate issue of the **Quarterly** came in 1970 when George Howe, Editor from 1968-1973, commended the California State Board of Education for their 1970 decision to include creationism in state-approved biology textbooks.³⁵

The President is also free to publish his own comments in the **Quarterly**, but only two CRS Presidents have done so: Henry Morris, President from 1967-1973, and Wayne Frair, President from 1987. Morris used his "Comments from the President" as a platform to argue for his particular view of creationism which was more theologically oriented than that of other CRS writers. He identified evolution as "anti-Christian" and spoke of the failure to turn from evolution to creation as a spiritual, rather than scientific, problem. He further argued that there were two motives behind the creationist movement: a return to true science and personal evangelism. Evolution blinds people to the truth of the Gospel of Jesus Christ, and the promotion of creationism helps open their minds so they will accept Christ as their Savior.³⁶ Most of his columns dealt more with theology than scientific matters, and underscored the religious nature of the Society's creationism.³⁷

Morris also used his column to introduce two new concepts: "scientific creationism" and the "two-model" approach to origins. In a 1971 article he identified "scientific creationism" as the presentation of the scientific evidence for creationism

³⁴William J. Tinkle, "Our Position: We Are Just Ourselves," **CRSQ** 6 (September, 1969), 79.

³⁵George Howe, "Editorial," **CRSQ** 6 (March, 1970) 159.

³⁶Henry Morris, "Comments From the President," **CRSQ** 5 (December, 1968) 96; "Comments From the President," **CRSQ** 6 (December, 1969) 120,155.; "Comments From President Morris," **CRSQ** 8 (December, 1971) 16-161.

³⁷See below, pp 157-158, for a discussion of the religious aspects of the CRS.

apart from any Scriptural data.³⁸ According to Morris the presentation of the scientific evidence for creation has, as its ultimate goal, personal evangelism. But the discussions of the evidence are to be carried on without reference to any Scriptural data. This was the first reference to “scientific creationism” in the **Quarterly** and showed a major change in Morris's thinking.³⁹ Rather than promote recent-creationism from a Biblical viewpoint as he had previously argued, Morris now contended that it should be presented strictly from an observational approach.⁴⁰ Other than Morris's columns, however, no other writer discussed “scientific creationism” in the **Quarterly**.⁴¹

The second concept Morris introduced was the two-model approach to origins.⁴² Morris argued that only two basic models or viewpoints exist for explaining origins: the evolution and creation models. Neither can be verified experimentally, but the one that provides the most rational explanation for the most data may be considered the correct one. The evolution model requires a mechanistic, non-supernatural origin to all things in the universe, especially life. The creation model begins

³⁸Henry Morris, “Comments From President Morris,” **CRSQ** 8 (December, 1971) 16, 161.

³⁹For detailed, critical evaluations of scientific creationism see Edward W. Morgan, “A Biblical and Theological Critique of Scientific Creationism,” (Ph.D. dissertation, Southern Baptist Theological Seminary, New Orleans, Louisiana, 1983); and Robert W. Prince, “An Examination of Henry M. Morris's Interpretation of Biblical Creation,” (Ph.D. dissertation, Southwestern Baptist Theological Seminary, Fort Worth, Texas, 1985).

⁴⁰John C. Whitcomb, Morris's co-author for **The Genesis Flood**, has rejected this approach. He claims that recent-creationism cannot be separated from its theological base. John C. Whitcomb, “Creation Science and the Physical Universe,” **Grace Theological Journal** 4 (April, 1983) 289-296.

⁴¹The Institute of Creation Research in San Diego, rather than the Creation Research Society, is responsible for the recent promotion of “scientific creationism.”

⁴²Henry Morris, “Comments from President Morris,” **CRSQ** 8 (March, 1972) 229-230.

with the special creation of the universe by a Creator, the maintenance of the creation by natural processes of conservation, and the limitation of life to major groups with specific forms and functions. Other writers have since contributed to the development of this concept.⁴³

The only other President to write a regular column is Wayne Frair, President since 1987. He publishes a short feature, "Remarks by the President," in which he briefly explains some aspect of the creationist position. In the March, 1988, issue, for example, he distinguished between the supernatural and the mechanistic elements in creationism. The former requires belief in the existence of a Creator while the latter is based upon observation. Observational data can be integrated into two general, mechanical explanations of origins: the "macro-evolution model and the abrupt appearance model."⁴⁴ The latter model is predicted by recent-creationism and, according to Frair, best fits the observational data. However, the establishment of this mechanical aspect of recent-creation does not automatically establish the religious aspect of the position. The existence of a Creator is a religious concept which cannot be empirically tested. Frair has not followed Morris's example of arguing the religious side of creationism.

These men represent the two ends of the theological spectrum within the CRS. Morris equated the rejection of recent creationism with the rejection of Christianity and identified evolution as a major spiritual stumbling-block to personal evangelism. "Scientific creation" was, for him, a means to an end. Frair, however, argues for strict-creationism from a non-religious, empirical position. He maintains that

⁴³Henry Morris, "Proposals for Science Framework Guidelines," **CRSQ** 8 (September, 1971) 147-150; John N. Moore, "Some Definitional Formulations," **CRSQ** 11 (June, 1974) 3-5; Glen Wolfrom, "Evolution, Science and Religion," **CRSQ** 12 (September, 1975) 84-88.

⁴⁴Wayne Frair, "Remarks by the President," **CRSQ** 24 (March, 1988) 165.

the data are better explained by the assumptions of creationism rather than evolution. But he makes no attempt to fit the data into a specific interpretation of Genesis, nor to discuss any specific connection between creationism and more general religious belief.

Regular Columns

In 1967 Harold Armstrong, an early CRS member and professor of physics at Queen's University in Ontario, Canada, started the **Quarterly's** first regular column, "Comments on Scientific News and Views."⁴⁵ In this feature he summarized items that had been published elsewhere which contained information of interest to creationists. For example, in the June, 1973, issue Armstrong discussed the origin of birds' dust baths. He argued that there is no way to explain the origin of this behavior from evolutionary concepts, though he gave no details for this assertion. Instead, he argued, it is evidence of God's design in creation. Armstrong also discussed the absence of bacteria in certain Antarctic valleys. Certainly, he claimed, bacterial spores were blown into the valleys from the outside, yet they failed to survive. This demonstrates that the bacteria had not adapted to their new environment, an observation that cast doubt upon the validity of evolutionary change. Again, he did not discuss any other explanations of this fact. Neither did he discuss the fact that adaptation requires several generations to appear, so if no bacteria grew, then there could be no adaptation. His sources included local newspapers, popular science magazines, and standard scientific journals such as **The Astronomical Journal** and **Science**.⁴⁶

⁴⁵Harold L. Armstrong, "Comments on Scientific News and Views," **CRSQ** 3 (January, 1967) 21-22.

⁴⁶Harold Armstrong listed **The Kingston-Whig Standard** newspaper, Ontario, Canada; **Science Progress**, **The Astronomical Journal**, and **Science**. **CRSQ** 10 (June, 1973) 69-72.

When Armstrong became Editor of the **Quarterly** in 1973 he stopped writing "Comments" and replaced it with a new column, "Panorama of Science," which is still published in the journal. This column publishes various news items contributed by **Quarterly** readers, with each contributor identified "to establish responsibility for review comments."⁴⁷ Unsigned contributions are submitted by the Editor.⁴⁸ The absence of technical articles in this column indicate that it is intended for a more popular audience than are the papers.

The December, 1980, issue provides a typical example of this column.⁴⁹ A two-page paper on horned beetles by Walter Lammerts noted the the equal number of large- and small-horned beetles of the same species. He argued that such co-existence creates a difficulty for evolutionists who claim that the larger horns increased the beetle's reproductive success. According to this theory, the beetle should not be found in equal numbers, but they are. Lammerts explains the horns, not as utilitarian devices, but as objects of beauty, showing the Creator's interest in even the "smallest of His creatures."⁵⁰

E. Norbert Smith, a biology teacher at El Reno Junior College, El Reno, Oklahoma, published a short note on the existence of underwater turbidity currents in the ocean depths and connected them with underwater erosion and deposition during the Noahican Deluge.⁵¹ Donald de Young, professor of physics at Grace College, Winona Lake, Indiana, submitted a third item in which he noted that satellite measurements

⁴⁷Harold L. Armstrong, "Panorama of Science," **CRSQ** 11 (June, 1974) 72.

⁴⁸Three such items were "Case of the Missing Tracks," "Marks on Mars Not Necessarily River Beds," and "Natural vs. Artificial Again." "Panorama of Science," **CRSQ** 12 (June, 1975) 66.

⁴⁹"Panorama of Science," **CRSQ** 17 (December, 1980) 185-188.

⁵⁰W. E. Lammerts, "Horned Beetles" (note 49), 187.

⁵¹E. Norbert Smith, "Turbidity Currents" (note 49), 42.

showed that the earth's magnetic field was decaying faster than had been previously suggested.⁵² Assuming that the current field has existed since the earth was created, de Young argued that the earth may be younger than many creationists previously thought.

Letters to the Editor

Since 1971 "Letters to the Editor" has been a regular feature of the **Quarterly**.⁵³ Until then no letters were published in the journal, nor were there indications that any had been received by the Society. In recent volumes the "Letters" column has occupied three to five pages in each issue.⁵⁴ Taking the December, 1987, issue as an example, letters discussed problems with data presented in a creationist film, a reply from a **Quarterly** author to one of his persistent critics, general comments on the problems of the evolutionary hypothesis, a discussion of species extinction, and comments on the evolution of language. There is one friendly exchange in which a writer offered additional information to buttress the argument of a previous book review. The original reviewer also published a letter in which he restated his original conclusion, incorporating the new information.⁵⁵ Sometimes the letters are longer and

⁵²Donald B. De Young, "Decaying of Earth's Magnetic Field" (note 49), 42-43.

⁵³In 1970 the Editor stated that he had no intention of establishing a regular "Letters" column, but would publish such communications as they came in. George Howe, "Editorial Comments," **CRSQ** 7 (December, 1970) 135. In 1971 he announced that this would become a regular feature "whenever valuable correspondence arrives." George Howe, "Editorial Comments," **CRSQ** 8 (June, 1971) 5-6.

⁵⁴Authors of these letters were included in the **Quarterly's** index beginning in 1974 with Volume 11.

⁵⁵The initial letter was Hansraudi Stutz, "Inclusions in Diamonds: Problem for an Ancient Earth Hypothesis," **CRSQ** 24 (December, 1987) 158. The reply was Eugene F. Chaffin, "Inclusions in Diamonds and Earth History," **Ibid.**

more detailed than the **Quarterly's** papers.⁵⁶ While the **Quarterly** does not publish evolution-oriented papers, it has published letters from those not identified with creationism and from creationists who are not in agreement with the Society's position.⁵⁷ There is no indication that any letters have not been published because of their evolution-oriented content.

Frequently authors of papers give detailed replies to letters from their critics. One example is an exchange between Jeffrey D. Wells, an entomologist at the University of Illinois, Chicago, who is not a member of the Society, and two **Quarterly** authors. Wells challenged the creationist position of the 1985 paper, "Insects Indicate Creation" by George Howe and Robert R. Sanders, and pointed out some factual errors by the authors. Howe and Sanders accepted Wells's criticisms and acknowledged their mistakes. They then offered additional material to support their original claims.⁵⁸

This section provides opportunity for informal exchanges of ideas. While most authors respond to critical letters, there is no indication they are required to do so. Wells' letter is the only one from an identified evolutionist. All others seem to have been written by creationists who are questioning or supporting various versions of this position. From this ratio one may conclude that few evolutionists are willing to interact with the **Quarterly** via letters.⁵⁹

⁵⁶John Woodmorappe wrote a 5-page letter criticizing several papers published by Glen Morton. John Woodmorappe, "Some Additional Comments" **CRSQ** 23 (September, 1986) 79-83.

⁵⁷For example, see Thor Heyerdahl, "Could the Ark Have Been a Reed Ship?" **CRSQ** 17 (December, 1980) 194, and Moshe Trop, "Is the Archaeopteryx a Fake?" **CRSQ** 20 (September, 1983) 121-122.

⁵⁸Jeffrey D. Wells, "Creationist Insect Errors: Letter to the Editor," **CRSQ** 24 (March, 1988) 209-210; George F. Howe and Robert R. Sanders, "A Couple of Insect Errors but Ample Evidence for Creation: A Reply to Wells," **CRSQ** 210-212. The original paper was "Insects Indicate Creation," **CRSQ** 22 (September, 1985) 166-170.

⁵⁹See below, pp. 150-154, for a more detailed discussion of the Society's impact on the scientific community.

Papers

The best evidence of a group's philosophy are the papers it publishes. The CRS is no exception, for it approaches science from a specific theological viewpoint, and the results are evident in the **CRSQ**'s papers. The theology expressed in the "Statement of Belief" forms the basis for the Society's epistemology, and the CRS consistently interprets the physical universe from this position. Their theology gives unity and purpose to the **Quarterly**'s papers which, to an "outsider," probably seem a hodge-podge of philosophy, theology, mythology, and science.

How scholarly are these papers? One indication of their scholarly nature is how much their authors interact with the current literature. In order to determine how frequently **Quarterly** authors cite recent publications three representative issues of the **CRSQ** were chosen at ten-year intervals (July, 1965; June, 1975; and June, 1985). All the literature cited in their major articles was counted and classified.⁶⁰ Then all books published within ten years of the issue and all journal articles published within five years were totaled.⁶¹ The same analysis was made on the three corresponding issues of **Science** (June, 1965, June, 1975, and June, 1985) and the results tabulated.⁶² The data are:

⁶⁰Regular columns, news items, and book reviews were excluded.

⁶¹These time spans were arbitrarily chosen to represent "current" literature.

⁶²The **CRSQ** published in July, not June, 1965. The closest issue of **Science** was June, 1965.

Issue	Articles	Total References	Creationist Sources	Books	Papers
Creation Research Society Quarterly					
July, 1965	4	30	2 (7%)	16 (23%)	7 (53%)
June, 1975	14	128	31 (24%)	26 (20%)	25 (20%)
June, 1985	7	123	50 (41%)	22 (18%)	18 (15%)
Science					
June, 1965	16	231		48 (21%)	109 (47%)
June, 1975	12	542		83 (15%)	204 (38%)
June, 1985	14	123		156 (18%)	408 (46%)

Since journal articles represent the latest work in a given field, they should be well represented in scholarly papers. This analysis shows that **Quarterly** writers cite current periodical literature far less frequently than their counterparts in **Science**. They also show an increasing tendency to quote other creationist authors (usually other recent-creationist authors), thus limiting their scholarly interaction with traditional science. By this measure **CRSQ** papers, as a whole, are less scholarly than those of recognized science journals.

A few papers, though, do show a thorough knowledge of current literature and accurately cite recognized authorities. One such paper quoted a wide variety of authors in his efforts to trace the current debates in theoretical biology. The author accurately represented the current views concerning the evolutionary development of life, including the latest work by proponents of punctuated equilibrium.⁶³ Such papers, though, are relatively infrequent in the **Quarterly**.

⁶³W. R. Bird, "The Postulated Evidence for Macroevolution and Darwinism: Darwinian Arguments and the Disintegrating Neo-Darwinian Synthesis (Part 1)," **CRSQ** 25 (June, 1988) 28-35 and Part II, **CRSQ** 25 (September, 1988) 74-80.

Interaction with differing views is another characteristic of scholarly writing. **CRSQ** articles seldom discuss, refer to, or cite the work of creationists other than recent-creationists. Only three papers have dealt with other creationist views, and those three were refutations of those positions.⁶⁴ Creationists who represent other viewpoints have made significant contributions to the creation-evolution controversy, but these works are ignored by the CRS.⁶⁵ This lack of interaction with other creationist views is another weakness of **Quarterly** papers.

Readers familiar with papers in the traditional journals will find a wide diversity in the tone of **Quarterly** papers. Some of them are quite argumentative, comparable to material found on the editorial pages of other publications.⁶⁶ Of course, polemic papers appear in other journals as well, but probably not with the frequency that they do in the **CRSQ**.⁶⁷ Some **Quarterly** papers, however, do show scholarly restraint and factual emphasis. One such paper describes CRS investigations of fossil tracks near Tuba City, Arizona. The tracks appear to be those of mammals and reptiles in strata from a time when only reptiles should exist. If true, this would be a significant out-of-sequence fossil discovery. Rather than claim victory over evolution,

⁶⁴The Gap Theory was rejected by John C. Whitcomb, "Genesis 1:2," **CRSQ** 2 (May, 1965) 3-6; the Day-Age Theory by Henry Morris, "The Day-Age Theory," **CRSQ** 8 (June, 1971) 72-75; and theistic evolution by Henry Morris, **CRSQ** 8 (March, 1972) 269-272.

⁶⁵For example, no reference has been found in any **Quarterly** paper to any paper published by the American Scientific Affiliation.

⁶⁶ Compare the tone of William V. Mayer, "Clandestine Science," **The American Biology Teacher** 49 (May, 1987) 269-270.

⁶⁷An good example of such a polemic is William V. Mayer, "The Arrogance of Ignorance--Ignoring the Ubiquitous," **The American Zoologist** 24 (1984) 423-431.

as some did with the purported human and brontosaurus tracks in Texas, the paper simply concluded that further study was needed to be sure of the claim.⁶⁸

Quarterly papers as a group also suffer from several other problems. Many of those which argue against evolutionary theory by highlighting the current debate among theoretical biologists assume that disagreement among evolutionists somehow establishes creationism.⁶⁹ They fail to recognize that such discussions are basic to science and do not imply rejection or even doubt about the concept of evolution. Creationism, even strict-creationism, is not without its debates, but this does not mean that the debaters have rejected creationism.⁷⁰ With a few exceptions **CRSQ** papers do not exhibit outstanding scholarship in their argumentation, documentation, or presentation.

The **Quarterly's** twenty-six volumes show little change in topics covered, or the emphasis given to individual subjects. The first volume of the **Quarterly**, published in 1964, had a total of 95 pages with twenty-three articles on fourteen different topics. Two papers were on the History of Creationism while Evolution, Genesis and Philosophy rated three papers each. By comparison, volume 24 (1987) was 219 pages long

⁶⁸The authors presented this conclusion even though some of them were personally convinced that the tracks were genuine. Paul O. Rosnau, Jeremy Auldane, George F. Howe, and William Waisgerber, "Are Human and Mammal Tracks Found Together with the Tracks of Dinosaurs in the Kayenta of Arizona? Part I: A History of Research and a Site Description," **CRSQ** 26 (September, 1989) 41-48 and "Part II: A Field Study of Quasihuman, Quasimammalian and Dinosaur Ichnofossils Near Tuba City," **CRSQ** 26 (December, 1989) 77-98.

⁶⁹One recent example of such a paper is W. R. Bird, "The Postulated Evidence for Macroevolution and Darwinism: Darwinian Arguments and the Disintegrating Neo-Darwinian Synthesis, Parts I and II" (note 58).

⁷⁰The one significant debate that appeared in the **Quarterly** was between Daniel Wonderly, who believed that the earth had existed for several hundred-thousand years, and Stuart Nevins, who argued for several thousand years. Daniel E. Wonderly, "Critique of 'Is the Capitan Limestone a Fossil Reef?' by Stuart Nevins," **CRSQ** 10 (March, 1974) 237-241 and Stuart Nevins, "Is the Capitan Limestone a Fossil Reef?" **CRSQ** 8 (March, 1972) 231-248.

with eighteen papers covering eleven topics. Four papers were devoted to Geology while Biology, Evolution, History, and Philosophy rated two each.

One subject that has gradually faded in importance is teleology. Papers with a direct teleological approach were published more frequently in the early volumes of the **Quarterly** than in the later ones. Of the thirty-two papers so classified, twenty-four of them are found before 1975. A good example of this type of paper is "The Jack-in-the-Pulpit Preaches a Sermon."⁷¹ The author discussed the intricacies of the plant, especially the fact that the first-year flowers are all staminate, and concluded that natural selection cannot possibly explain this flower.⁷² The doctrine that best accounts for these observations, according to the author, is creationism.

The emphasis of papers since 1975 is more on the scientific aspects of their topics than the theological ones. Biology, geology, and physics are the major fields covered in the **Quarterly**. The numerical data indicate that biology was the most frequently discussed topic, accounting for 154 papers, nearly one-quarter of the total. Geology was second with 126 papers for 18%. Third was physics with 51 papers for 7%.

Biology Papers

Biology papers cover many topics, among them the chemical evolution of life. **CRSQ** writers have evaluated theories concerning the origin of life and consistently rejected the idea that anything as complex as self-replicating molecules could have come into existence by random operation of bio-chemical processes. The first volume

⁷¹William J. Tinkle, "The Jack-in-the-Pulpit Preaches a Sermon," **CRSQ** 6 (June, 1969) 65-66.

⁷²See also Harold W. Clark, "The Plants Will Teach You," **CRSQ** 2 (July, 1965) 3-5.

of the **CRSQ**, for example, presented a paper on biochemical evolution.⁷³ The author described the 1953 efforts of Stanley Miller to derive organic molecules from the interaction of an energy source and a mixture of inorganic gases as “trivial,” because a reducing atmosphere on the early earth was “thermodynamically impossible,” though he gave no details for this claim.⁷⁴ This paper also noted that geological evidence, specifically ancient strata which contain carbonite, demonstrates that the earth always had an oxidizing atmosphere, not the reducing one postulated by Miller. Further, the author argued that even if spontaneous generation of amino acids occurred, the concentrations required for the random formation of nucleotides would be impossible to achieve under natural conditions, such as in bodies of water. The entire scenario requires more faith than sight, for “no molecule capable of autocatalytic replication has as yet been discovered . . . although such a molecule is often postulated by evolutionists.”⁷⁵

A second paper in this first volume supported the first.⁷⁶ Spontaneous generation, according to this article, is a religious view which attributes to “chance” the characteristics of deity. The basic problem with biochemical evolution, according to

⁷³Duane T. Gish, “Critique of Biochemical Evolution,” **CRSQ** 1 (October, 1964) 10-12.

⁷⁴In 1953 Stanley Miller, then of the University of Chicago, published the results of a now-classic experiment in which he passed an electric spark through a mixture of methane, ammonia, hydrogen, and water. He argued that the early earth probably had such an atmosphere and that his experiment duplicated conditions that could have occurred in such a setting. The spark energized the formation of many organic molecules, among them certain amino acids. Miller argued that his work showed a possible scenario for the chemical evolution of life. Stanley L. Miller, “A Production of Amino Acids Under Possible Primitive Earth Conditions,” **Science** 117 (May 15, 1953) 528-529. Also see Stanley Miller, “Production of Some Organic Compounds Under Possible Primitive Earth Conditions” **Journal of the American Chemical Society** 77 (May 12, 1955) 2351. The claim of thermodynamic impossibility is from Gish, “Biochemical Evolution,” (Note 73), 11.

⁷⁵Gish, “Biochemical Evolution,” (Note 73), 12.

⁷⁶Paul Zimmerman, “The Spontaneous Generation of Life,” **CRSQ** 1 (January, 1965) 13-17.

the author, is its inability to account for the amazing chemical complexity of the living cell. Such a complex entity must be the result of intelligent design, not random reactions. Another paper discussed the mathematical probability of random protein synthesis.⁷⁷ The authors concluded that the probability of obtaining a protein with a chain of 100 amino acids as a random product from a mixture of amino and carboxyl acids, aldehydes, and simple amines was 10^{-157} . Such improbability, they maintain, is the equivalent of impossibility, and strongly argues for the direct, intelligent creation of life.

The development of life is another important topic for **Quarterly** authors. Specific phylogenies of certain groups have been examined and the standard evolutionary explanations are rejected. **CRSQ** authors argue instead for the direct creation of the major kinds of life as genetically distinct entities. One such paper argued that blue-green algae did not evolve from bacteria, as commonly stated, because of differences in spores, pigment, biochemistry, and movement.⁷⁸ God created each of these life-forms as genetically separate entities, and they have maintained that separation throughout their development.

Quarterly papers have also questioned the origin of specific biological systems. "The Phylogenetic Development of Sweat and Mammary Glands" is representative of this approach.⁷⁹ The author discussed the presence of sweat and mammary glands in various types of mammals. Evolutionary theory, he argued, asserts that mammary glands developed from sweat glands, yet some mammals do not have sweat

⁷⁷M. Trop and A. Shaki, "Is Molecular Evolution of Proteins Possible?" **CRSQ** 11 (June, 1974) 28-29.

⁷⁸George Howe, "The Origin of the Blue-Green Algae," **CRSQ** 4 (December, 1967) 100-105.

⁷⁹David A. Kaufmann, "Phylogenetic Development of Sweat and Mammary Glands," **CRSQ** 16 (June, 1979) 75-77.

glands whereas all have mammary glands. This inconsistency is not predicted by evolutionary theory, but it “fits the predictions of the creationist model better than the evolutionary one.”⁸⁰ Evolution, according to the author, predicts an “upward, irreversible development” of these structures as one moves “up the ladder of mammalian development.”⁸¹ The creation model predicts that the Creator made different provisions for different animals in terms of sweat and mammary glands. However, nothing in evolutionary theory requires that individual structures show such a developmental pattern. The creation prediction amounts to saying that whatever is found will be found because that is how the Creator made it. The author misunderstands evolutionary theory and offers a tautology in place of a prediction from creation.

Human evolution is an important issue for the CRS since the Society affirms that the direct, recent creation of Adam and Eve marks the origin of mankind. One paper examined the evidence for human evolution provided by morphology, taxonomy, reconstructions, brain size, and fossil dating methods and concluded that none of these areas offers a compelling reason to accept the concept of human evolution.⁸² Morphology offers no insight into the “humanness” of the fossil's original owner, for physically misshapen people exist today, and few, if any, would deny their humanity. Taxonomic classification is difficult enough when dealing with living forms, and becomes an almost impossible task when dealing with a limited number of fossil forms, most of which are incomplete. Reconstructions ultimately reflect the opinion of the artist, so they cannot be used to establish ape or human ancestry. Cranial volume offers no proof of the intelligence, language, or emotion of the individual, whether in

⁸⁰David A. Kaufmann, “Phylogenetic Development of Sweat and Mammary Glands” (note 80), 77.

⁸¹*Ibid.*, p. 75

⁸²George Howe, “Evolution and the Problem of Man,” *CRSQ* 5 (June, 1968) 23-33.

living or fossil forms. People today show a wide range of such volumes. The paper explains the location of human fossils in ancient strata as "intrusions" caused by local catastrophes or the Noachian Deluge. In each case the traditional evidence supporting human evolution is found wanting.

Another paper offered a "creation-dispersal" model to explain humanoid fossils.⁸³ The author argues that the creation of man occurred in the Mesopotamian region and that mankind dispersed from there. This dispersal and subsequent fragmentation of social units led to frequent in-breeding which, in turn, led to increased morphological diversity. There is, according to the author, a direct relationship between a fossil's morphological distance from modern man and its geographical distance from Mesopotamia. The further removed the specimen is from this area, the less it resembles modern man. The author also suggests a possible chronology for this scenario:

Creation	Man formed perfect	±7000 BC
Dispersion	Neanderthal Pithecanthropine Australopithicine	
Flood	Racial dispersion	±5000 BC
Present		

Quarterly paper on human evolution have centered on man's physical development. They have not explored the problem of his spiritual origin, a topic which should be of major significance to the Society. Here is one area where **CRSQ** authors could gain support from and offer help to others wrestling with this problem.⁸⁴

⁸³R. Daniel Shaw, "Fossil Man: Ancestor or Descendant of Adam?" **CRSQ** 6 (March, 1970) 172-181.

⁸⁴Creationists outside the CRS have challenged this aspect of human evolution, but **CRSQ** seem unaware of their work. For example, see Davis Young, "An Ancient Earth is not a Problem; Evolutionary Man Is," **Christianity Today** 36 (October 8,

Biology papers which deal with evolutionary theory usually follow one of several lines of argumentation. One is that evolution is a theoretical construct, not a scientifically established "law," therefore it is wrong to assume it to be true and to insist that the evolutionary viewpoint is the only way to interpret data.⁸⁵ Another argument is that the proposed mechanisms whereby evolution functions, i.e. mutation and natural selection, are insufficient to account for all known life-forms. These mechanisms, according to **Quarterly** authors, play a limited role in the development of living forms which belong genetically and therefore developmentally to distinct groups termed "kinds." Indeed, these two mechanisms have never been observed to produce a major change in life-form.⁸⁶

CRSQ writers reject natural selection as a sufficient mechanism to account for the presence of new organs or systems. This concept, one paper argues, is a trivial explanation of natural population control.⁸⁷ All that natural selection accomplishes is the elimination of abnormal, diseased, or injured members of a population. If a particular member of a group were to start down the mutational road to a new organ or system, say, wings instead of forefeet, then natural selection would eliminate that individual, since the proto-wings degraded the normal use of the forefeet without providing any immediate compensatory benefit.

1982) 41-45. Two Jesuit philosophers have edited a volume of essays from recognized scholars which deal with this problem. Some of these essays offer significant support to the concept that at least man's spiritual nature is a direct creation from God. Again, **CRSQ** writers have not interacted with these discussions. John N. Deely and Raymond J. Nogar, **The Problem of Evolution: A Study of the Philosophical Repercussions of Evolutionary Science** (New York: Appleton-Century-Crofts, 1972).

⁸⁵For example, William Tinkle, "The Reign of Law," **CRSQ** 13 (June, 1976) 44-46.

⁸⁶For an example of this argument, see Jerry Bergmann, "Natural World's Struggle of the Strongest or Balance of All—Both Strong and Weak?" **CRSQ** 16 (December, 1979) 174-175.

⁸⁷C. H. Mosher and William J. Tinkle, "Natural Selection Inadequate," **CRSQ** 6 (March, 1970) 182, 184.

Quarterly papers consistently reject the concept of macro-mutation, that is, the development of one distinct type of living thing from another distinct type. The 1974 article on "Variation and Fixity in Nature" is a typical example of a paper dealing with the concept of "kinds." The author first illustrates the variation that is found in living things, then calls attention to the limits of that variation.⁸⁸ Living things, extant and extinct, exist in many basic types, each of which is distinct from the others. According to evolutionary theory, these basic types have developed from other basic types, so such discontinuities should not exist. Further, no one has ever observed the production of one basic type from another one. The existence of distinct types and their genetic stability is in complete accord with the Genesis statement that life was created in basic types, or "kinds," which were and are genetically isolated from one another.

An additional argument against macro-evolution is that observed genetic reproductive barriers between major life-forms cannot be crossed today and have not been crossed in the past. All current breeding evidence supports the stability of the major forms, and the absence of transition forms in the fossil record supports this concept.⁸⁹ This agrees with the Genesis account of the direct creation and genetic isolation of life according to basic "kinds."

Three major themes dominate papers devoted to biology: The impossibility of random processes producing extremely complex entities, the inability of mutations and natural selection to account for the development of new organic systems, and the absence of any transitional forms, living or dead, between the distinct forms of life observed today. In view of these problems, **Quarterly** writers conclude that the most

⁸⁸Frank L. Marsh, "Variation and Fixity in Nature," **CRSQ** 11 (June, 1974) 60-68.

⁸⁹Frank L. Marsh, "Variation and Fixity in Nature" **CRSQ** 11 (June, 1974) 60-68.

reasonable position is the divine creation of life in distinct groups or “kinds,” as described in Genesis 1, with each group subject to minor variations, such as the different types of canines, within its genetic limits.

Geology Papers

Geology is the next most frequent topic of **Quarterly** papers. Three subjects predominate: First, reinterpretation of geologic evidence in light of the recent-creation viewpoint; second, challenges to the standard geologic dating methods; and, third, exploration of fossil evidence to find data to support the recent-creationist position. If the earth were created and the Noahican Deluge had reworked its surface, then observations should show evidence of catastrophic origin of geological formations. Discontinuous strata, inverted sedimentary sequences, and gaps between the major life forms in the fossil record should also be present. The geological papers published in the **Quarterly** claim to have found such evidence.

A typical example of a paper dealing with evidence supporting the catastrophic origin of major geological formation is the paper on the El Capitan Limestone formation in southwestern New Mexico. The usual interpretation of this formation is that it is an extremely large fossil reef which represents the gradual accumulation of coral-produced limestone.⁹⁰ Many years would be required to accumulate such an amount of limestone under those conditions, more time than permitted in the recent-creationist view. If this traditional interpretation is true, then the El Capitan fossil reef would be extremely difficult, if not impossible, to reconcile with a recent-creation. The author argued that the limestone is the result of rapid deposition of debris from

⁹⁰See, for example, Frank Press and Raymond Siever, **Earth**, second edition (San Francisco: W. H. Freeman & Co., 1978), pp. 283-293.

the Noahican Deluge.⁹¹ Given the Society's acceptance of the Flood and recent-creationism, there was, of course, no other conclusion he could have reached. If he had determined that the Capitan formation supported geologic ages in any way, his paper would not have been published in the **Quarterly**.

Other papers have questioned the traditional interpretation of overthrusts, areas where older strata are found on top of younger strata. The traditional explanation is that the strata were deposited in the normal sequence, then a large block of the earth's crust was thrust sideways, sliding the older strata on top of the younger rock. Erosion then removed the topmost layers, leaving behind a sequence of inverted strata.⁹² According to the CRS papers, however, there is no evidence for any overthrusting, such as fragmented rock or rock powder in the contact plane. CRS writers conclude that the strata were deposited in their present order, not deposited in the traditional sequence, and then disrupted by later geological activity. The variations in sequence that exist are explained as the localized effects of the turbulent waters of the Deluge as they randomly deposited erosional debris across the globe according to varying local conditions. If the strata were actually deposited as they now are, then the traditional stratigraphic interpretation of the geologic column is suspect.⁹³

Quarterly papers also have challenged standard geological dating procedures, since their results clearly contradict the recent-creation concept. Some papers present literature searches to document inconsistencies in radioactive decay rates and

⁹¹Stuart E. Nevins, "Is the Capitan Limestone a Fossil Reef?" **CRSQ** 8 (March, 1972) 231-248.

⁹²This explanation is detailed in Robert Compton, **Interpreting the Earth** (New York: Harcourt, Brace, and Jovanovich, Inc., 1977), pp. 332-336.

⁹³A good example of such a paper is Walter E. Lammerts, "Overthrust Faults in Glacier National Park," **CRSQ** 3 (June, 1966) 61-63. See also Clifford Burdick and Harold Slusher, "The Empire Mountains--A Thrust Fault?" **CRSQ** 6 (June, 1969) 49-54.

isotope formation.⁹⁴ Others detail experimental research to uncover errors in other dating mechanisms. Walter Lammerts, for example, did laboratory work on bristlecone pines to see if they could produce more than one growth ring per year. He found that drought-induced stress can cause bristlecone seedlings to add an extra growth ring. Assuming that the mature trees would face drought conditions “during about 50% of the years between the end of the Flood and about 1200 A.D.,” he concluded that the estimated age of 7100 years for the oldest could be lowered to c. 5600 years, thus lowering the normal calibration points of dates based on Carbon-14 analysis.⁹⁵

CRS writers raise two other questions about radiometric dating systems. The first is that of the long-term dependability of the indexes used in the various systems. Half-life stability of geologically-significant isotopes and the accepted production rate of atmospheric Carbon-14 have all been challenged. For example, one paper, “Radiometric Geochronology Reappraised,” published 470 radiometrically determined dates culled from the literature and called attention to the discrepancies between them.⁹⁶ According to the author, the popular notion that all radiometric dates are in agreement is due not to fact, but to a willingness on the part of uniformitarian geologists to explain away discrepancies. He cited several non-creationist geologists who raise questions about the dependability of radiometric dating and questioned

⁹⁴Harold Armstrong, “Research Sponsored and Encouraged by the C.R.S.” **CRSQ** 13 (September, 1976) 105; Emmett L. Williams, “Report on Research Projects,” **CRSQ** 12 (September, 1975) 119. A related paper is Robert L. Whitelaw, “Radiocarbon and Potassium-Argon Dating in the Light of New Discoveries in Cosmic Rays,” **CRSQ** 6 (June, 1969) 71-73.

⁹⁵Emmett Williams, “Report on Research Projects” (Note 71), p. 119; Walter E. Lammerts, “Are the Bristlecone Pine Trees Really So Old?” **CRSQ** 20 (September, 1983) 108-115.

⁹⁶John Woodmorappe, “Radiometric Geochronology Reappraised,” **CRSQ** 16 (September, 1979) 102-129.

whether any such dates should be accepted. The existence of discrepancies within these data does not prove the validity of recent-creationism, nor does skepticism on the part of some workers prove that they reject evolution.

The other question concerning radiometric dating involves the sample itself. Accurate radiometric dating requires a geologist to know two things about a given sample. First, he must determine the original composition of the sample. Then he must ascertain what changes are the result of nuclear processes and which are due to environmental effects. **Quarterly** writers conclude that the evidence supporting the traditional geologic time scale is weak at best and that it should be rejected. They then argue that the earth is around 10,000 years old, a date more in keeping with the genealogical evidence of Genesis 5 and 10.⁹⁷

The final geological question **Quarterly** papers raise concerns the fossil record. If the Society's view of origins is correct, then the fossil record should show the identical differentiation between the basic types of life as is seen in the present. There should be no transitional forms to show lines of descent of one basic kind of life from another one. Recent-creationists also argue that the formation and deposition of fossils was the result of the Noahican Deluge. If so, then the fossil record should demonstrate evidence of rapid, indeed catastrophic deposition, an absence of transitional forms, and little or no over-all pattern to the vertical sequence of fossil deposition.

Papers in the **Quarterly** have dealt with all these topics. The absence of transitional forms in the fossil record is a popular subject for **CRSQ** writers.⁹⁸

⁹⁷For an evaluation of this evidence, see Richard J. Niessen, "A Biblical Approach to Dating the Earth: A Case for the Use of Genesis 5 and 11 as an Exact Chronology," **CRSQ** 19 (June, 1982) 60-66. Niessen claims that the Genesis genealogies have no gaps in their data and that they can be used to establish an exact date for Creation.

⁹⁸For example, John N. Moore, "Documentation of Absence of Transitional Forms," **CRSQ** 13 (September, 1976) 110-111.

Unfortunately no **Quarterly** paper has evaluated the theory of punctuated equilibrium and the work of Gould, Elderedge, and others who support it. Since this theory of evolutionary development acknowledges the scarcity of such transitional forms, it would seem that strict-creationists would show a great deal of interest in it. To date (1989), no **CRSQ** has discussed the topic. Other papers on fossils present evidence of rapid burial and violations of the traditionally the expected order of deposition. An example of the former is a paper which reports the existence a fossil fish which the author found buried in diatomaceous earth. Its body cut through several layers of the deposit, yet was so well-preserved that individual scales can be removed intact.⁹⁹ This, he argued, could only be explained by rapid burial, such as in the Deluge. A second writer pointed to petrified trees as another example of rapid fossil formation.¹⁰⁰ Still another paper described violations of the anticipated sequence of fossil depositions and concluded that they offered support for the catastrophic deposition caused by the Flood.¹⁰¹

The most dramatic **Quarterly** claims concerning out-of-sequence fossils claim to present evidence of human fossils in strata that traditional geologists say are millions of years old. One of these papers described the discovery of a human skeleton in a Cretaceous sandstone formation.¹⁰² Unfortunately this skeleton was uncovered during a quarrying operation in which all the overlying material had been removed. Without that rock in place it was impossible to claim that the buried individual did

⁹⁹Bernard E. Northrup, "The Sisquoc Diatomite Fossil Beds," **CRSQ** 6 (December, 1969) 129-135.

¹⁰⁰Harold G. Coffin, "Research on the Classic Joggins Petrified Trees," **CRSQ** 6 (June, 1969) 35-44.

¹⁰¹Marvin Lubenow, "Reversals in the Fossil Record: The Latest Problem in Stratigraphy and Phylogeny," **CRSQ** 13 (March, 1977) 185-190.

¹⁰²Clifford Burdick, "Discovery of Human Skeletons in Cretaceous Formation," **CRSQ** 10 (September, 1973) 109-110.

not reach the site via a cave or fissure. Because of this, other **Quarterly** papers rejected the original author's identification of this skeleton as clear example of an out-of-sequence human fossil.¹⁰³ Another proported example was a "human" skull found in a coal bed. Wayne Frair evaluated this claim and concluded that the object was not a human skull at all but rather a skillfully done fake.¹⁰⁴ Another paper reported a fossil sandal-print which contained a trilobite.¹⁰⁵ No additional reports concerning this find were published, either in the **Quarterly** or other journals, so it seems that the evidence was not as persuasive as first thought. This seems to be the case with most of these claims. Wilbert Rusch, for one, investigated several other claims of fossil human footprints and concluded that most were not authentic, but a few seemed genuine and merited further study.¹⁰⁶

The most striking creationist claims of human footprints side by side with dinosaur prints along the Paluxy River in Texas did not come from the CRS. The Paluxy River prints did become the subject of a religious documentary film entitled "Footprints in Stone," but they were never the subject of a paper in the **Quarterly**.¹⁰⁷ In 1982 additional evidence was presented which caused most people, creationists and

¹⁰³Duane Gish, "A Decade of Creationist Research," **CRSQ** 12 (June, 1975) 36.

¹⁰⁴ Wayne Frair, "The Human Skull Composed of Coal," **CRSQ** 5 (March, 1969) 133-135.

¹⁰⁵William J. Meister, "Discovery of Trilobite Fossils in Shod Footprint of Human in 'Trilobite Beds' - a Cambrian Formation, Antelope Springs, Utah," **CRSQ** 5 (December, 1968) 97-102. Also see Duane Gish, "A Decade of Creationist Research," **CRSQ** 12 (June, 1975) 36.

¹⁰⁶Wilbert Rusch, "Human Footprints in Rocks," **CRSQ** 7 (March, 1971) 201-213. He did not include the Paluxy River footprints in his survey.

¹⁰⁷Clifford Burdick, a CRS founder, was the outspoken proponent of the man-dinosaur interpretation. The CRS, however, never officially supported him in his efforts. Details of the film are given by Henry M. Morris, **History of Modern Creationism** (n. 14), pp. 283-285. One **Quarterly** paper did refer to the prints as a violation of the standard geologic sequence of life: Erich von Fange, "Time Upside Down," **CRSQ** 10 (June, 1974) 13-27.

evolutionists alike, to identify the depressions as naturally eroded dinosaur prints rather than human footprints.¹⁰⁸ So far no **Quarterly** paper has reported any unambiguous examples of human fossils which are out of the expected geological sequence.¹⁰⁹

Clifford Burdick, a member of the founding Board and consulting geologist, provided what the Society considers its most compelling out-of-sequence fossil find.¹¹⁰ He claimed to have identified fossil gymnosperm and angiosperm pollen grains in Precambrian rocks in the Grand Canyon.¹¹¹ Since this pollen represents highly structured plants and Precambrian rocks contain little or no fossils of complex life forms, such a find would seem to challenge the traditional interpretations of both evolutionary biology and geology. Although Lammerts, who was then Editor of the **Quarterly**, was skeptical, he published Burdick's original paper.¹¹² Burdick pursued his work on fossil pollen and later the Society decided to fund additional

¹⁰⁸Details of the re-evaluation of the Paluxy prints by creationists are given in "The Case of the Mystery Footprints: A Clear Victory for Evolutionists," **Discover** 7 (August, 1986) 8,10. Earlier John D. Morris, the son of Henry Morris, published a letter in which he retracted the human footprint explanation he had formerly championed, "The Paluxy River Mystery," **Nature** 321 (19 June 1986) 722. James Farlow continued the discussion with his letter entitled "In the Footsteps of Dinosaurs?" **Nature** 323 (2 October 1986) 390.

¹⁰⁹See above, note 68, for details of current Society work on this topic.

¹¹⁰In his introduction to a three-part survey of this research, George Howe claims that evolutionists have shown "considerable interest" in this discovery, but he gives no details. George Howe, "Creation Research Society Studies on Precambrian Pollen: Part I - A Review," **CRSQ** 23 (December, 1986) 99.

¹¹¹Clifford Burdick, "Microflora of the Grand Canyon," **CRSQ** 3 (May, 1966) 38-50.

¹¹²Walter Lammerts, personal letter to the author, November 10, 1987.

research on this find.¹¹³ The CRS has continued this project and recently published a four-part review of this work.¹¹⁴

The discovery of spores in Precambrian strata is a significant but not unexpected find. Their existence had been predicted as early as 1959. At that time Daniel Axelrod of the University of California stated that almost 60 Cambrian spore-genera were already known and that "The future discovery of a Precambrian vascular land flora of complex nature should therefore not amaze us"¹¹⁵ The Society's discovery of such Precambrian spores, if valid, ranks as a major contribution to the field. So far their work seems to have been ignored by palynologists and paleobotanists, for there is no reference to the **Quarterly** papers in the **Science Citation Index**.¹¹⁶

Physics Papers

Physics papers have centered on three subjects: non-relativistic theories of gravity, challenges to radiometric dating methods and theory, and the application of thermodynamics to the problem of origins. Recent-creationists prefer classical physics because it offers concepts that are intuitively familiar and its underlying philosophy is more congenial to creationism. This physics provides a clear demarcation

¹¹³See below, pp. 142-143, for details of this research effort.

¹¹⁴The CRS work is summarized in three papers: George F. Howe, "Creation Research Society Studies on Precambrian Pollen: Part I - A Review," **CRSQ** 23 (December, 1986) 99-104; George F. Howe and Walter E. Lammerts, "Creation Research Society Studies on Precambrian Pollen - Part II: Experiments on Atmospheric Pollen Contamination of Microscope Slides," **CRSQ** 24 (March, 1987) 151-153; George F. Howe, Emmett L. Williams, George T. Matzko, and Walter E. Lammerts, "Creation Research Society Studies on Precambrian Pollen - Part III: A Pollen Analysis of Hakatai Shale and Other Grand Canyon Rocks," **CRSQ** 24 (March, 1988) 173-182. This last paper includes two pages of microphotographs made with light and scanning electron microscopes.

¹¹⁵Daniel Axelrod, "Evolution of the Psilophyte Paleoflora," **Evolution** 13 (1959) 264. The possible existence of such fossil pollen was also suggested by S. Leclercq, "Evidence of Vascular Plants in the Cambrian," **Evolution** 10 (1956) 109-113.

¹¹⁶While the **CRSQ** is not indexed in the **Science Citation Index**, citations from the **Quarterly** in other journals are listed.

between the observer and the external universe, both of which exist independently of the other. The physical universe is a determined one, that is, its behavior could be predicted and controlled.

Quarterly writers claim that quantum mechanics and relativity changed all this. Now the observer cannot be separated from the observed, physical processes are, at their most basic level, random events, and the universe does not exist apart from man. In contrast **CRSQ** authors maintain that modern physics simply is an extension of classical physics, rather than something wholly different. Therefore classical concepts such as discrete, separately-existing particles should be retained in any explanation of the universe. One such paper rejected the modern concept of the electron as a wave rather than a discrete particle. Instead the authors supported a creationist theory that the electron is a definite particle with a resonating magnetic field, rather than a wave function.¹¹⁷ **Quarterly** authors accept as valid the attempts of other writers to use modern physics to support Eastern mysticism which creationists identify as pantheistic.¹¹⁸ **CRSQ** authors have concluded that quantum physics is itself pantheistic and rejected it as unchristian. For example, the same paper which rejected the wave concept of the electron also concluded that "positivist and pantheistic views regarding modern physics are not only antichristian by nature, but they corrupt and destroy the discipline of science."¹¹⁹ Most evangelicals, however, recognize that

¹¹⁷S. G. Smith and C. E. Geist, "Quantum Physics: Historical Review and Current Directions," **CRSQ** 23 (September, 1986) 66-71. They support the work of Thomas Barnes, "A New Theory of the Electron" **CRSQ** 14 (March, 1978) 210-220.

¹¹⁸One such work is Fritjof Capra, **The Tao of Physics** (New York: Random House Publishers, 1975).

¹¹⁹They define Positivism as the "Belief that only empirical observations have real meaning and that conclusions beyond observables should be disregarded." By this definition classical physics would also have to be identified as positivistic, since it also ignores unobservables, such as human emotions and divine beings.

quantum physics is theologically neutral and is no inherent threat to Christian theism.¹²⁰

Yet modern physics has explained some observations better than classical physics. Gravity and atomic structure are two areas where relativity and quantum mechanics have been successful in explaining data that contradicted the predictions of classical physics. **Quarterly** authors are aware of this, yet they persist in rejecting the standard relativistic and quantum mechanical treatments of gravity and the atom. One author, for example, has developed alternative theories of gravity and the hydrogen atom based on classical electromagnetic concepts. He claims that this theory accounts for current observations without recourse to modern physics and its "non-physical" concepts.¹²¹

Other papers discuss the physics behind geochronological methods. One such paper analyzed the earth's magnetic field and its measurable decay in strength.¹²² The author argued that since there is no known mechanism for sustaining the field over geologic history, its strength must be decaying from some initial value. If one assumes that the earth was created with a magnetic field which had an intensity fairly close to its present value, then the observed decay rate yields an estimated age of 10,000 years.

¹²⁰A good summary of the evangelical position is given by Allen Emerson, "A Disorienting View of God's Creation," **Christianity Today** 29 (February 1, 1985) 19-24. A leading evangelical theologian, Carl Henry, also agrees with this assessment. Beth Spring, "A Conversation with Carl Henry About the New Physics," **Ibid.**, p. 26.

¹²¹Thomas G. Barnes, "Another Theory of Gravitation: An Alternative to Einstein's General Theory of Relativity," **CRSQ** 12 (March, 1976) 194-197; "A New Theory of the Electron," **CRSQ** 14 (March, 1978) 210-220; and "Transformer Analogue for the Hydrogen Atom," **CRSQ** 21 (March, 1985) 186-189.

¹²²Thomas G. Barnes, "Decay of the Earth's Magnetic Moment and the Geochronological Implications," **CRSQ**, 8 (June, 1971) 24-29.

Thermodynamics is a popular topic for creationist papers. **Quarterly** authors maintain that the basic concepts of the two foundational “laws” of thermodynamics fit a creationist frame work better than a uniformitarian one.¹²³ The first “law” states that energy is neither created nor destroyed. The most reasonable theistic explanation, then, is that God established the total energy of the universe when He created it. According to the second “law” all energy spontaneously flows from states of higher energy to those of lower energy or, in terms of entropy, from states of greater order to those of greater disorder.¹²⁴ The second “law” fits the creationist view that God “wound up” the universe at creation and it has been running downhill ever since. The second law also supports the creationist argument that highly structured entities, such as self-replicating molecules, could not have come into existence as the result of random natural processes. Rather they have to be the result of intelligently directed acts of creation.¹²⁵

Quarterly authors recognize that the Second Law describes closed systems and that the earth is not closed, for it receives energy from the sun. They argue that the addition of energy to the earth is insufficient to account for the development of complex structures, such as self-replicating molecules or enzymes. Energy alone cannot overcome the natural tendency of any system, closed or open, toward disorder. A mechanism or “motor” must exist for utilizing this energy to increase the order

¹²³Emmett L. Williams, “A Simplified Explanation of the First and Second Laws of Thermodynamics: Their Relationship to Scripture and the Theory of Evolution,” **CRSQ** 5 (March, 1969) 138-147; Henry M. Morris, “Evolution Theory and Thermodynamics,” **CRSQ** 6 (March, 1970) 199-200; Emmett L. Williams, “Thermodynamics: A Tool For Creationists,” **CRSQ** 10 (June, 1973) 38-43.

¹²⁴Emmett L. Williams, “Resistance of Living Things to the Second Law of Thermodynamics: Irreversible Processes, Open Systems, Creation and Evolution,” **CRSQ** 8 (September, 1971) 117-126.

¹²⁵Duane T. Gish, “The Nature of Speculations Concerning the Origin of Life,” **CRSQ** 7 (June, 1970) 42-45.

within the system. Such mechanisms, **CRSQ** writers maintain, has to be added to its system; it cannot come into existence on its own by random processes. This, of course, accords with the doctrine of creation.¹²⁶

Biblical Topics

While biology, geology, and physics are the major topics dealt with in the **Quarterly**, they represent only 48% (331 out of 698) papers published. Biblical studies, such as the Genesis account of creation, the Noahic Deluge, and the pre-Flood earth are also popular topics for **CRSQ** authors.¹²⁷ These papers illustrate the Society's integration of science and Scripture, for both are valid sources of factual data.¹²⁸ This world-view integrates both sources to obtain a unified explanation of the current universe with the literal interpretation of the Bible guiding their interpretation of the observational data.

The Bible, for example, records the dimensions of Noah's Ark. Principles of marine engineering demonstrate that the craft was ideally designed to survive the turbulent flood conditions of the Deluge. Together science and Scripture provide a complete picture of this event with the Bible telling how Noah obtained the plans for the Ark, and science telling why this particular design was selected. Ideally, Scripture informs science, since the Bible alone is inspired and infallible. Sometimes the **Quarterly's** Biblical papers use science to inform or interpret Scripture. For example,

¹²⁶Details of this view are developed in the writings of Emmett Williams and Henry Morris. A summary paper is Henry Morris, "Evolution Theory and Thermodynamics" (note 123), 199-200.

¹²⁷Arthur J. Jones, "How Many Animals in the Ark?" **CRSQ** 10 (September, 1973) 102-108; J. E. Schmich, "The Flood and the Ark," **CRSQ** 11 (September, 1974) 120-122.

¹²⁸See above, pp. 6-10, for a more detailed discussion of the Society's theological position.

a paper suggesting that the atom is a discrete particle with magnetic resonance identifies the created light of Genesis 1 as "resonant energy."¹²⁹

More **CRSQ** papers deal with the Noahican Deluge than any other Biblical event. Seven papers have dealt with the Ark itself, including discussions of its size, contents, course, and discovery. The paper entitled "The Ark of Noah," for example, evaluated the engineering details of a craft with the Ark's dimensions.¹³⁰ In English measurements the Ark's dimensions were 450 feet long, 75 feet wide, and 45 feet high (Genesis 6:15). It was a rectangular barge with a capacity of 1.5 million cubic feet and an estimated displacement of around 10,000 tons. As such it would be extremely stable in heavy seas, due to its length-width ratio, and self-righting in rolls of almost 90 degrees. Another paper discussed how many animals Noah had to have on the Ark in order to insure the survival of the various created "kinds" and concluded that 2000 creatures would have been sufficient.¹³¹ Another paper discussed life inside the Ark, and yet another gave a progress report on attempts to locate the craft on Mount Ararat in Turkey.¹³² Other papers have argued that the waters of the Flood were the cause of diverse geological phenomena, such as the ice age and random sedimentation patterns.¹³³ Still others discussed the survival of plants and marine animals during the Flood.

¹²⁹S. G. Smith and C. E. Geist, "Quantum Physics: Historical Review and Current Directions" (note 117), 66-71.

¹³⁰Henry M. Morris, "The Ark of Noah," **CRSQ** 8 (September, 1971) 142-144.

¹³¹Arthur J. Jones, "How Many Animals in the Ark?" **CRSQ**. 10 (September, 1973) 102-108.

¹³²Raymond Bray, "Inside the Ark: A Modern World," **CRSQ** 16 (June, 1979) 16-17; John Morris, "Update on the Search for Noah's Ark," **Ibid.**, p. 28.

¹³³Reginald Daly, "Was the Ice Age Caused by the Flood?" **CRSQ** 11 (March, 1975) 213-217; G. L. Johnson, "The Genesis Flood and the Geological Record," **CRSQ** 11 (September, 1974) 108-110.

Genesis 1:7 speaks of waters above and below the “expanse,” or atmosphere. Consequently many creationists postulate the existence before the Flood of a water “canopy” surrounding the earth, either within or above the atmosphere. **Quarterly** papers have speculated on the possible nature of this suggested “canopy” and its effects on climate and even longevity, for such a water barrier could have shielded the earth from a significant amount of incident radiation.¹³⁴ This entire discussion hinges on one preposition in Genesis 1:7, for there is no other scriptural reference, direct or implied, to such a water barrier. There is, of course, no observational evidence, direct or indirect, for such a canopy, so **Quarterly** writers who support the canopy's existence do so because of conviction, not observation. Yet they frequently fail to grant evolutionists the same privilege of defending their position because of their conviction, not their observations.¹³⁵

Historical Studies

Historical studies published in the **CRSQ** have given the background of Creationism in general, the biographies of creationists from past generations, and details of specific events in the history of science which are important to creationists. One example of general creationist history paper is entitled “Creationism in the Twentieth Century.” The writer highlighted the work of some of Darwin's early twentieth-century opponents as well as several more recent critics.¹³⁶ The article then

¹³⁴Stanley Udd, “The Canopy and Genesis 1:6-8,” **CRSQ** 12 (September, 1975) 90-93; Joseph C. Dillow, “Scripture does Not Rule Out a Vapor Canopy,” **CRSQ** 16 (December, 1979) 171-173; Gary L. Johnson, “Global Heat Balance with a Liquid Water and Ice Canopy,” **CRSQ** 23 (September, 1986) 54-61. Jody Dillow, “The Attenuation of Visible Radiation Through the Vapor Canopy,” **CRSQ** 14 (September, 1977) 139-141.

¹³⁵See, for example, Raymond C. Telfair II, “Should Macroevolution be Taught as Fact?” **CRSQ** 10 (June, 1973) 53-61.

¹³⁶William J. Tinkle, “Creationism in the Twentieth Century,” **CRSQ** 10 (June, 1973) 44-47

discussed current anti-evolution organizations without offering any detailed evaluation or analysis of their work.

Four papers have dealt directly with Darwin himself. Two such papers, "Darwin's Last Hours" and "Darwin's Last Hours Revisited," provided detailed evidence from Darwin's journals which refutes the legend that he recanted his evolutionary philosophy and embraced creationism on his death-bed.¹³⁷ Another paper criticized Darwin for not staying with his early theological training and for confusing natural and artificial selection.¹³⁸ Finally, Darwin's religious pilgrimage from traditional Anglican (not evangelical) Christianity to agnosticism was detailed in "Darwin's Religious Beliefs."¹³⁹

Another history paper dealt with Bishop William Wilberforce, best known today for his debate with T. H. Huxley.¹⁴⁰ The author, a Research Fellow at King's College, Cambridge, England, rejected the popular description of Wilberforce as a symbol of "ante-diluvian intransigence."¹⁴¹ He examined Wilberforce's views from the Bishop's writings and concluded that he had, unlike many today, read and understood Darwin's arguments. Natural selection, Wilberforce argued, was not an agent change, but essentially conservative, weeding out those individuals which differed from the norm of any given population. It did not, indeed, could not produce new species. The Bishop recognized the existence of limited variation within a given population and

¹³⁷Wilbert Rusch, "Darwin's Last Hours," **CRSQ** 12 (September, 1975) 99-102; "Darwin's Last Hours Revisited," **CRSQ** 21 (June, 1984) 37-39.

¹³⁸William J. Tinkle, "Darwin, the Unusual One," **CRSQ** 19 (September, 1982) 112.

¹³⁹John W. Klotz, "Darwin's Religious Beliefs," **CRSQ** 21 (March, 1985) 165-170.

¹⁴⁰Richard Wrangham, "The Bishop of Oxford: Not So Soapy," **CRSQ** 16 (March, 1980) 224-225.

¹⁴¹*Ibid.*

criticized Darwin for shifting from adaptive to ancestral explanations of different characteristics. The paper argues that Wilberforce ignored the effects of a changing environment on the development of life and thus missed a key ingredient in Darwin's evolutionary theory. Nevertheless, concluded the paper, Wilberforce acknowledged the factual basis of Darwin's synthesis and interacted fairly with his arguments.

A brief paper on Erasmus Darwin, Charles Darwin's grandfather, argued that Erasmus' book, **Zoonomia**, had anticipated his grandson's theory.¹⁴² With no documentation the writer claims that Charles' book prompted Malthus's **Essay on Population** and gave Wallace the idea of natural selection. Charles, the author argued, had read this book while at the University of Edinburgh and had obtained his ideas from it, not from his own observations. Charles was faulted for not giving credit to his predecessors.

Asa Gray's theistic differences with Darwin were the subject of another historical study.¹⁴³ Gray, one of Darwin's earliest American supporters, attempted to combine evolutionary theory with theism by including God as the ultimate source of life and the director of the various "streams of development." The first concept raised no philosophical difficulty for Darwin, since he did not specify the origin of life, but the second was more difficult. If God directed the course of a species' development, then the role of natural selection was minimized. The paper correctly notes that Gray and Darwin never reconciled this difference. Although the author prefers Gray's approach to Darwin's, he rejects both, since neither is capable of accounting for either the absence of transitional forms in the fossil record or out-of-sequence fossils.

¹⁴²A G. Tilney, "The Father of Evolution," **CRSQ** 13 (March, 1977) 191.

¹⁴³Randall R. Hedtke, "Asa Gray and Theistic Evolution," **CRSQ** 17 (December, 1980) 181-185.

Education Papers

The teaching of evolution and creation was the subject of a number of papers. One paper entitled "Teaching About Origin Questions" argued that the origin of the universe, the earth, and life itself are all beyond observation.¹⁴⁴ Whatever explanation a person gives for their origin depends upon his presuppositions. Theistic and non-theistic presuppositions are equally valid starting points for seeking an explanation of the world. The issue is not the theory of origins one has, but the starting point for that theory.

The same author argued in another paper that there are really two theories of evolution, General and Special.¹⁴⁵ The General theory deals with the development of one major kind of life-form from other kinds. According to this theory transitional forms should exist in the fossil record or scientists should have observed such transitions between diverse "kinds" in order to account for the diversity of species that exist today. CRS writers reject *archaeopteryx* as a valid transition form, classifying it as a true bird. Instead they claim that no true transitional fossils have been found and classify the General theory of evolution as speculation, not science.¹⁴⁶ The Special theory, on the other hand, deals with developmental change within the genetic limits of the major kinds. In some cases this change has produced a remarkable variety of

¹⁴⁴John N. Moore, "Teaching About Origin Questions," **CRSQ** 21 (September, 1984) 115-119, 189-194.

¹⁴⁵"General" and "special" correspond to the more familiar macro- and micro-evolution terminology. John N. Moore, "Should Evolution be Taught?" **CRSQ** 7 (September, 1970) 105-116.

¹⁴⁶Colin Brown, "Another Look at Archaeopteryx," **CRSQ** 17 (September, 1980) 87, 109; and Moshe Trope, "Is the Archaeopteryx a Fake?" **CRSQ** 20 (September, 1983) 121-122.

species.¹⁴⁷ This theory is, according to CRS writers, testable, observable, and thus true science.¹⁴⁸ The General theory should be “optional” for science classes, but the Special theory should be taught to all.

This same approach is followed by the papers which discuss the philosophy of evolution and creation. Issues of origins are properly the realm of the philosopher and theologian, not the scientist. The theory of evolution, in its most general form, is a “philosophical dogma of continuity.” It cannot be observed and thus it is outside the realm of science.¹⁴⁹ Science itself is a “method, a tool to learn what is, what exists, and how parts of reality interact.”¹⁵⁰ This definition eliminates both creation and evolution as legitimate objects of scientific study, since neither one has been observed. CRS writers have consistently opposed the idea that evolutionary theory is true science.

Research Papers

In addition to these topics, a number of **Quarterly** papers have presented the results of personal and CRS-supported research.¹⁵¹ One of these project studied the reproduction rate of planaria in overcrowded conditions. The author concluded that

¹⁴⁷For example, the 500 fruit fly species now in Hawaii “are thought to be the descendants of one or two females.” Laurie Burnham, “Love on the Fly,” **Scientific American** 258 (June, 1988) 30-32.

¹⁴⁸In addition to Moore, this view has been supported by Frank L. Marsh, “The Form and Structure of Living Things,” **CRSQ** 6 (June, 1969) 13-25.

¹⁴⁹Arthur Jones, “The Nature of Evolutionary Thought,” **CRSQ** 8 (June, 1971) 44-49.

¹⁵⁰Jerry Bergman, “What is Science?” **CRSQ** 20 (June, 1983) 39-42.

¹⁵¹See below, pp. 136-149, for additional discussion of research in the CRS. Duane Gish has published the only summaries of personal and CRS-supported research: “A Decade of Creationist Research,” **CRSQ** 12 (June, 1975) 34-46; “More Creationist Research (14 Years)—Part I: Geological Research,” **CRSQ** 25 (March, 1989) 161-170; and “More Creationist Research (14 Years)—Part II: Biological Research,” **CRSQ** 26 (June, 1989) 5-12.

planaria naturally limited their reproduction rate in overcrowded conditions and suggested that such mechanisms may have operated in all life forms in the Garden of Eden.¹⁵² Another examined the effect of a spontaneous mutation which generated an extra cotyledon on a tomato plant. This paper concluded that the mutation weakened the plant's viability, supporting the author's rejection of mutations as a source of evolutionary "improvement" of a species.¹⁵³

Book Reviews

Book reviews are an important part of most scientific journals, for they keep subscribers abreast of books published in a given field. The **Quarterly**, like other journals, devotes a section of each issue to such reviews. The majority of books reviewed are scientific ones, but books on other subjects, such as history and theology, are included as well, especially if they support the Society's position. There is no overall pattern to the subject matter of books reviewed.

The fifteen book reviews published in the March, 1976, issue, are typical of those found in the **Quarterly**. Five of the books reviewed were written by CRS Board members.¹⁵⁴ Three of these argued against evolution, one of them discussed "Scientific Creationism," and one was a physics textbook designed for Christian high schools. Four other reviews covered books which offered interpretations of history,

¹⁵²E. Norbert Smith, "Crowding and Asexual Reproduction of the Planaria, *Dugesia Dorocephala*," **CRSQ** 10 (June, 1973) 3-10.

¹⁵³William Tinkle, "Pleiotropy: Extra Cotyledons in the Tomato," **CRSQ** 8 (December, 1971) 183-185.

¹⁵⁴Henry M. Morris, **Introducing Scientific Creationism Into the Public Schools** (San Diego: Institute for Creation Research, 1975); **Many Infallible Proofs** (San Diego: Creation-Life Publishers, 1974); **Scientific Creationism (General Edition)** (San Diego: Creation-Life Publishers, 1974); **Troubled Waters of Evolution** (San Diego: Creation-Life Publishers, 1974); and Emmett Williams and George Mulfinger, **Physical Science for Christian Schools** (Greenville, South Carolina: Bob Jones University Press, 1974).

anthropology, and physiology that fit some of the creationist views of the CRS.¹⁵⁵ Three of the other books reviewed were by Clifford Wilson, a writer who specializes in “debunking” fanciful, often preposterous explanations of such things as UFO's, and whose views, like those of the Society, frequently go against traditional science.¹⁵⁶ Two of the other books discussed the science-evolution question from a view favorable to creationism.¹⁵⁷ The last one reviewed was a college-level textbook on vertebrate development.¹⁵⁸

While some books are assigned to reviewers for evaluation, most reviews seem to be voluntary contributions from CRS members. Occasionally two reviews of the same book are published.¹⁵⁹ There is no indication whether publishers submit book to the Society for review, or whether reviewers are free to write about whatever they choose to read.

The **Quarterly** gives its readers a consistent presentation of recent-creationism as it is found in various topics, with the majority of them centering on the scientific

¹⁵⁵John Lenham, **Human Engineering** (London: Weidenfeld and Nicolson, 1974); William R. Corliss, **Strange Artifacts: A Sourcebook on Ancient Man** (Glen Arm, Maryland: Published by the Author, 1974); **Strange Planet: A Sourcebook of Unusual Geological Facts** (Glen Arm, Maryland: Published by the Author, 1975); and Harold Camping, **Adam When?** (Alameda, California: Frontiers for Christ, 1974).

¹⁵⁶Clifford Wilson, **Crash Go the Chariots** (New York: Lancer Books, 1972); **Gods in Chariots and Other Fantasies** (San Diego: Creation-Life Publishers, 1975); and **In the Beginning God** (Grand Rapids: Baker Book House, 1975).

¹⁵⁷Marshall and Sandra Hall, **Truth, God or Evolution?** (Nutley, New Jersey: The Craig Press, 1974) and John Hudson, **When Science Falls** (Grand Rapids: Baker Book House, 1974).

¹⁵⁸Harold W. Manner, **Vertebrate Development** (Dubuque, Iowa: Kendall/Hunt Publishing Company, 1975).

¹⁵⁹Harold Armstrong, the Editor, reported to the 1974 Board that he had assigned two books for review, but gave no indication who received them. Wayne Frair, “Report of 1974 Board of Directors Meeting, **CRSQ** 11 (September, 1974) 126-127. An example of two reviews of the same book are the two reviews of Harold Clark's book, **Fossils, Flood and Fire** (Escondido, CA: Outdoor Pictures, 1968). **CRSQ** 7 (December, 1970) 169-171.

aspects of this view. Some of these papers, such as those rejecting relativity and quantum mechanics, present arguments that few outside of the CRS would find compelling. Others, however, deal with significant issues, such as the fossil pollen discoveries, that scientists outside the CRS have researched. All authors, though, write from a consistent recent-creationist point of view which reflects the Society's conservative, evangelical theology.

The Writers

A writer does not have to be a member of the CRS to publish, but his work must agree with the Society's recent-creationist views.¹⁶⁰ Early issues of the **Quarterly** occasionally reprinted papers by non-creationists which offers significant support for the creationist position.¹⁶¹ However, a former Editor recently stated that the CRS is "getting more and more conservative on the issue of having non-members or dissidents' articles in the [**Quarterly**] as other journals are available for that material."¹⁶² The **CRSQ**¹⁶³, he argues, should be reserved for papers from those who support its position, not challenge it. Other Editors, for the most part, have adhered to this position.

¹⁶⁰Two articles by Moshe Trop, and Israeli anti-evolutionist, have been published. In all probability he could not sign the Society's Statement of Belief, so he is probably a non-member. The two articles are "Was Evolution Really Possible?" **CRSQ** 11 (March 1975) 183-187 and "Is the Archaeopteryx a Fake?" **CRSQ** 20 (September, 1983) 121-122.

¹⁶¹Harold S. Gladwin, "Dendrochronology, Radiocarbon, and Bristlecones," **CRSQ** 15 (June, 1978) 24-26. Reprinted from the **Anthropological Journal of Canada** 14 (December, 1976) 2-7.

¹⁶²George Howe indicated that this policy was officially instituted by Emmett Williams when Williams became Editor in 1973 and that he (Howe) is in complete agreement with it. George Howe, personal communication, February 29, 1988.

¹⁶³**Quarterly** editorial policy is discussed above, pp. 67-68,. See Wayne Frair, "Minutes of the 1985 Annual Meeting" (n. 19), for a complete statement of current editorial policy.

One might anticipate that a journal with limited circulation would be dominated by a handful of authors, and this is the case with the **Quarterly**. From June, 1964 to March, 1988, 269 people out of an average membership of around 1600 per year wrote the 698 articles in the journal.¹⁶⁴ One group has produced more than one-third of these papers: the CRS Board. The thirty-two men who have served on the Board of Directors published 243 (35%) of these articles. The non-Board authors averaged less than two papers per person while the Board averaged over seven. Even then, not all Board members made equal contributions. Together William Tinkle, George Howe, and Walter Lammerts published 86 papers, over 12% of the total. Probably this is a very high percentage when compared to traditional scientific journals. However, in light of the unique nature of the CRS this situation is not unexpected. It is

¹⁶⁴For the period from June, 1964 to March, 1988, the most frequent contributors to the **Quarterly** are:

	Articles	Percent
Tinkle, William J. (B)	34	5
Howe, George (B)	30	4
Lammerts, Walter (B)	22	3
Armstrong, Harold (B)	17	2
Barnes, Thomas (B)	17	2
Burdick, Clifford (B)	14	2
Williams, Emmett (B)	14	2
Moore, John N. (B)	13	2
Smith, E. Norbert (B)	11	2
Akridge, G. Russell	9	1
Morris, Henry (B)	9	1
Gish, Duane (B)	8	1
Rusch, Wilbert (B)	7	1
Bergman, Jerry	5	1
Frair, Wayne (B)	4	1
Kaufmann, David (B)	4	1

Board Members (past and present) are designated (B). These figures are for regular articles and do not include regular features, such as "Comments from the President" and "Panorama of Science."

remarkable that the leaders have not contributed more of the **Quarterly's** articles and book reviews.¹⁶⁵

Summary

How effective is the **Quarterly**?¹⁶⁶ One measure of the **Quarterly's** impact is its impact on the scientific community, which has been zero. No evidence has been published which shows that anyone has been converted to creationism by the **Quarterly's** papers. Nor is there evidence that the larger scientific community is interacting with the CRS and the issues it has raised.

The journal's impact on the creationist community has been more symbolic than substantive. The Society's loss of 1000 members during the 1980's probably indicates that **Quarterly** papers are not highly valued by recent-creationists. Rejection by even part of the creationist community, of course, is more serious than rejection by the scientific community. One probable reason for this response by creationists is the

¹⁶⁵The most frequent book reviewers are:

	<u>Reviews</u>	<u>Articles</u>
Armstrong, Harold (B)	— 33	11
Howe, George (B)	— 21	8
Williams, Emmett (B)	— 18	6
Frair, Wayne (B)	— 13	5
Davidheiser, Bolton (B)	— 12	5
Barnes, Thomas (B)	— 7	3
von Fange, Erich	— 9	4
Ingram, Robert	— 6	2
Rusch, Wilbert (B)	— 6	1
Lammerts, Walter (B)	— 5	2
Butler, Larry (B)	— 4	2
Gish, Duane (B)	— 4	2
Tinkle, William (B)	— 3	1
Smith, E. Norbert (B)	— 2	1

Board Members (past and present) are designated (B).

¹⁶⁶See below, pp. 158-161, for a more detailed analysis of the **CRSQ**.

fact that the **CRSQ** has turned away from its original audience. Walter Lammerts identified “educators, pastors, theologians, and laymen” as the ones who were to benefit from the **Quarterly**.¹⁶⁷ The shift to more technical articles, including ones where differential equations and integral calculus occupy more space than does the text, shows that the intended audience is now the professional scientist rather than the educated layman.¹⁶⁸ Doubtless this shift in audience has reduced the appeal of the **CRSQ** to the creationist community. The CRS would do well to return to their original target audience..

¹⁶⁷Walter Lammerts, “Introduction,” **CRSQ** 1 (March, 1965) 1-2.

¹⁶⁸As one example, higher mathematics abounds in Thomas Barnes, “Another Theory of Gravitation: An Alternative to Einstein’s General Theory of Relativity,” **CRSQ** 12 (March, 1976) 194-197.

CHAPTER 4

CREATION RESEARCH SOCIETY BOOKS

The Creation Research Society has produced nine books to date (1990). The first one was a high school biology text, **Biology: A Search for Order in Complexity** (1970), which was followed by three anthologies of **Quarterly** papers: **Why Not Creation?** (1970), **Scientific Studies in Special Creation** (1971), and **Speak to the Earth: Creation Studies in Geoscience** (1975).¹ A second series, called a "Monograph" series, began in 1981. Books in this second series center around specific topics of importance to creationism. So far three monographs have been published: **Thermodynamics and the Development of Order** (1981), **Design and Origins in Astronomy** (1983), and **The Argument: Creationism vs. Evolutionism** (1984).² The Society has also distributed one original work, **Variation and Fixity in Nature** (1976).³ Their latest book, **Did**

¹John N. Moore and Harold S. Slusher, editors, **Biology: A Search for Order in Complexity** (Grand Rapids: Zondervan Publishing House, 1970); Walter E. Lammerts, editor, **Why Not Creation: Selected Articles from the Creation Research Society Quarterly Volumes I Through V (1964-1968)** (Grand Rapids: Baker Book House, 1970); Walter E. Lammerts, editor, **Scientific Studies in Special Creation: Selected Articles from the Creation Research Society Quarterly Volumes I Through V (1964-1968)**, (Grand Rapids: Baker Book House, 1971); and George F. Howe, editor, **Speak to the Earth: Creation Studies in Geoscience** (Nutley, New Jersey: Presbyterian and Reformed Publishing Company, 1975).

²Emmett L. Williams, editor, **Thermodynamics and the Development of Order** (Norcross, Georgia: CRS Books, 1981), George Mulfinger, editor, **Design and Origins in Astronomy** (Norcross, Georgia: CRS Books, 1983), and Wilbert H. Rusch, **The Argument: Creationism vs. Evolutionism** (Norcross, Georgia: CRS Books, 1984).

³Frank L. Marsh, **Variation and Fixity in Nature** (Mountain View, California: Pacific Press Publishing Association, 1976).

Charles Darwin Become a Christian?, is a reprint of three **Quarterly** papers which disprove the legend that Charles Darwin recanted his evolutionism on his death-bed.⁴

CRS Biology Text

The biology text has been the Society's most ambitious and most successful publishing effort. In 1963 Mel and Norma Gabler, of Longview, Texas, began critiquing public school texts and filing complaints against those which challenged what they perceived as traditional values.⁵ One of their first targets was a then-new series of high school biology texts which emphasized evolution as the unifying concept of biology. These were produced by the American Institute of Biological Scientists, which had established the Biological Sciences Curriculum Study (BSCS) in 1959. Under sponsorship of the National Science Foundation this group produced a series of high school biology texts, collectively known as the BSCS books.⁶ Unlike most biology texts then in use, the BSCS books did not relegate evolutionary concepts to a separate chapter. Instead they treated evolution as the foundational concept of modern biology and integrated the concept into every major topic.

When the Gablers reviewed the BSCS texts they were upset by this systematic presentation of evolutionary theory. They then filed complaints with the Texas State

⁴Wilbert H. Rusch and John W. Klotz, **Did Charles Darwin Become a Christian?** (Norcross, Georgia: CRS Books, 1984).

⁵The Gablers were two individuals outside the education community who had a deep interest in the content of books used in the local school systems. They had the time and resources to make their findings known, first in the Longview area, then throughout Texas. In 1973 Mel retired from his position with an Exxon district office. Their work is summarized by Dorothy Nelkin, **The Creation Controversy: Science or Scripture in the Schools** (Boston, Massachusetts: Beacon Press, 1982), pp. 63-65.

⁶The BSCS books are Bentley Glass and Arnold B. Grobman, **Biological Science: An Inquiry into Life** (New York: Harcourt, Brace, and World, Inc., 1963), American Institute of Biological Sciences, **Biological Science: Molecules to Man** (Boston, Massachusetts: Houghton-Mifflin Company, 1963), and American Institute of Biological Sciences, **High School Biology: BSCS Green Version** (New York: Rand McNally, Inc., 1963).

Board of Education which, in 1969, removed the books from the list of state-approved texts. The Gablers' efforts were supported by testimony from Thomas Barnes, a physics teacher at the University of Texas, El Paso, and John Grebe, a retired chemist. Both men were also members of the Creation Research Society's original Board. Since there were no extant alternative texts religiously neutral enough to be used in the public schools, the Gablers prevailed upon Barnes to contact the CRS and see if the Society might produce such a text. In 1965, the Board voted to produce a high-school level biology text which would be balanced in its treatment of both creation and evolution.⁷

Barnes was appointed Chairman of the project with the responsibility of selecting and directing a team of writers. He chose twelve CRS Board members to serve on the initial editorial board, and a number of others were involved in the writing.⁸

⁷Henry Morris, **History of Modern Creationism** (San Diego, California: Master Books, Inc., 1984), pp. 190-191. The original CRS textbook committee consisted of Russell C. Artist, Thomas G. Barnes (CRS Board Member), Bolton Davidheiser, Douglas Dean, Duane T. Gish (CRS Board Member), George F. Howe (CRS Board Member), John W. Klotz (CRS Board Member), Walter E. Lammerts (CRS Board Member), John N. Moore (CRS Board Member), Jack Wood Sears, William J. Tinkle (CRS Board Member), Rita Rhodes Ward, and Paul A. Zimmerman (CRS Board Member). "Textbook Committee," **CRSQ** 2 (July, 1965) 4.

⁸The book lists the following contributors: Russel C. Artist, Ph.D., Professor of Biology, David Lipscomb College, Nashville, Tennessee; James Baker, M.S., Plant Pathologist, El Paso, Texas; Larry Butler (CRS Board Member), Ph.D., Associate Professor of Biochemistry, Purdue University, Lafayette, Indiana; Bolton Davidheiser (CRS Board Member), Ph.D., former head of Biology Department, Biola College, La Mirada, California; H. Douglas Dean (CRS Board Member), Ph.D., Professor of Biology, Pepperdine College, Los Angeles, California; Duane T. Gish (CRS Board Member), Ph.D., Research Associate, The Upjohn Company, Kalamazoo, Michigan; George F. Howe (CRS Board Member), Ph.D., Chairman, Division of Natural Sciences, Los Angeles Baptist College, Newhall, California; John W. Klotz, Ph.D., Professor of Biology, Concordia Senior College, Fort Wayne, Indiana; Walter E. Lammerts (CRS Board Member), Ph.D., Geneticist, Freedom, California; Frank Lewis Marsh (CRS Board Member), Ph.D., Professor of Biology, Andrews University, Berrien Springs, Michigan; Henry M. Morris (CRS Board Member), Ph.D., Professor of Hydraulic Engineering, Virginia Polytechnic Institute, Blacksburg, Virginia; Wilbert H. Rusch (CRS Board Member), M.S., Professor of Natural Sciences, Concordia Lutheran Junior College, Ann Arbor, Michigan; Jack Wood Sears, Ph.D., Professor of Biology, Harding College, Searcy, Arkansas; William J. Tinkle (CRS Board Member), Ph.D., Head of Science Department (retired), Taylor University, Upland, Indiana; Rita Rhodes Ward, M.A., Biology Instructor, Austin High School, El Paso, Texas; Patricia Ann Wilder, M.A., Herbarium Botanist, Pomona College, Claremont, California; and Paul A. Zimmerman (CRS Board Member), Ph.D., President, Concordia Lutheran Junior College, Ann Arbor, Michigan. No information is available on the specific contribution of each in-

John Moore and Harold Slusher of the CRS Board served as the over-all editors of the text. All editors and writers served without pay, and their expenses were underwritten by private donations.⁹

The CRS had hoped that the book would be published by a standard textbook publisher, but none of the fifteen they contacted would even consider it.¹⁰ Some, like G. P. Putnam & Sons, Holt, Rinehart & Winston, and Charles Scribner never responded to the Society's initial letter.¹¹ Harper & Row already had a biology text under consideration, so they declined to consider the CRS text.¹² Charles E. Merrill Publishing Company showed some initial interest in the book, but then rejected the project without reviewing the manuscript or meeting with any of the editorial staff. Merrill claimed that the text's philosophy of was not in keeping with that of their previously published science texts.¹³ The Society then signed a publishing agreement with Zondervan Publishing House, Grand Rapids, Michigan, a Christian publishing firm which specializes in religious material. In 1970 the book came off Zondervan's

dividual. John N. Moore and Harold S. Slusher, editors, **Biology: A Search for Order in Complexity** (n. 1), pp. xvi-xvii.

According to Tinkle, however, most of the work was done by by Butler, Howe, Klotz, Lammerts, Tinkle, and Ward, with "little contribution from others." William Tinkle, letter to Wayne Frair, July 25, 1978, personal file of Wayne Frair, Briarcliff, New York.

⁹Walter Lammerts presented the idea to the **Quarterly** readership and made the first appeal for funds in "Introduction," **CRSQ** 2 (May, 1965) 1-2. By the Fall of 1966 the Textbook Committee reported that the book was one-half complete and \$700 had come in. "Textbook Committee Report," **CRSQ** 3 (October, 1966) 17. Writers were thanked for their volunteer work by the 1970 Board. William Tinkle, "Report of the [1970] Board of Directors," **CRSQ** 7 (September, 1970) 127-128.

¹⁰Henry Morris, **History of Modern Creationism** (n. 7), p. 195.

¹¹Thomas Barnes, personal letter to author, February 22, 1989.

¹²Mr. Wallace E. Sears, Editor-in-Chief, Science Textbooks, personal letter to Thomas G. Barnes, September 3, 1968. The original is in the personal files of Thomas G. Barnes, El Paso, Texas.

¹³Malcom S. Hayden, Managing Editor, Charles E. Merrill Publishing Company, personal letter to Thomas G. Barnes, April 18, 1969. The original is in the personal files of Thomas G. Barnes, El Paso, Texas.

presses and enjoyed some early success.¹⁴ Three years later the CRS produced a teacher's guide and a student laboratory manual to accompany the text.¹⁵

The book itself was comparable in size (548 pages) to a regular high school biology text. Spot color highlighted the black-and-white photographs and line drawings, but there were no full-color pictures or illustrations. The text lacked a glossary and the index was incomplete. For example, it did not include "fossils" and "paramecium," although these subjects were discussed in the text.

The book gave a summary of a three-kingdom classification system and the general organisms included in each category. The contents seemed deliberately arranged to avoid any hint of evolutionary phylogeny. For example, the chapter on vertebrates discussed mammals first, then birds, reptiles, amphibians, and fish, in that order, rather than the traditional fish, amphibians, reptiles, bird, and mammals sequence.¹⁶

Like the BSCS books, this text integrated its philosophy of origins into all sections. Sometimes, however, the arguments for recent-creationism were not always balanced by corresponding arguments for evolution. For example, the chapter on "The Nature of Living Things" discussed the concepts vitalism ("Life is more than chemistry.") and biogenesis ("Life only comes from life.") without any immediate ref-

¹⁴Zondervan's Vice-president of Publications stated that this book brought them more compliments and letters of interest than any other book they had published. Robert K. DeVries, personal letter to Thomas G. Barnes, January 14, 1971. The original is in the files of Thomas G. Barnes.

¹⁵Olive Fischbacher, Ralph Paisley, and William Tinkle, **Teacher's Guide to Accompany Biology: A Search for Order in Complexity** (Grand Rapids: Zondervan Publishing House, 1971); Robert C. Glotzhober, John N. Fricke, and Lawrence L. Meissner, **Investigations into Biology: A Student's Laboratory Manual** (Grand Rapids: Zondervan Publishing House, 1973).

¹⁶John N. Moore and Harold S. Slusher, editors, **Biology: A Search for Order in Complexity** (n. 1), pp. 247-265. See Robert A. Wallace, **Biology: The World of Life** (Santa Monica, California: Goodyear Publishing Company, 1981), pp. 190-203, for a brief presentation of the traditional sequence.

erence to other views.¹⁷ The text did not present the evolutionary view on these topics until the end of the book where chemical evolution was discussed under the heading "Problems for Evolutionists."¹⁸

An entire unit was devoted to "Theories of Biological Change" in which recent-creationism was elaborated.¹⁹ A brief (one and one-half page) explanation of fossils and the concept of index fossils was followed by five-page discussion of problems with the evolutionary interpretation of the fossil record.²⁰ These problems included the absence of transition fossils and the use of radiometric dating techniques for absolute age determination. This last topic, an important one from both viewpoints, only merited a half-page discussion. This was insufficient for a book designed for high-school use, whether creation-oriented or not.

The text avoided discussing the specifics of the Genesis account of creation and basic Christian theology. However, it assumed that the readers were familiar enough with these concepts to allow general references to them without explaining the details. Discontinuities in the fossil record, for example, were described as a confirmation of a "major prediction based upon the Genesis account of creation" without explaining the particular account.²¹ The existence or non-existence of God (assumed to be the God of evangelical Christian theology) is beyond experimental verification, hence both God and the Bible are beyond "the proper methods of study of scientists."²² Yet

¹⁷John N. Moore and Harold S. Slusher, editors, **Biology: A Search for Order in Complexity** (n. 1), pp. 61-81.

¹⁸*Ibid.*, pp. 441-449.

¹⁹*Ibid.*, pp. 398-461.

²⁰*Ibid.*, pp. 403-410.

²¹*Ibid.*, pp. 441-449.

²²*Ibid.*, p. 460.

Biblical references were given to show that observations of science were consistent with "creationism," assumed to be a Biblically-based, recent-creationism.²³

The text's refusal to acknowledge the existence of other creationist views probably limited its appeal to the wider evangelical community and its church-related schools which were a significant market. In the 1963-64 school year 110 such high schools enrolled 33,283 students.²⁴ Between 1967 and 1978 the Christian school movement experienced unprecedented growth, so when the text was published a substantial market existed, one that would have justified the book's continued publication.²⁵ However, schools, public and Christian, did not buy the book in sufficient quantities to keep it in print. Factors, such as numerous printing errors, contributed to this, but doubtless the text's emphasis upon recent-creationism played a role in this situation.²⁶

The initial printing of 10,000 copies of the text was completed in November, 1970. Unfortunately, this first run contained a large number of errors, such as wrong

²³The text cites Hebrews 1:10-12 to support the idea that the first and second laws of thermodynamics are in keeping with creationism. *Ibid.*, p. 461. The discussion of fossils would be a logical place to mention other creationist views which allow for geologic ages, but the only two explanations presented are the traditional view of geology and the young-earth concept. *Ibid.*, pp. 410-419.

²⁴Mark Fakkema, "The Christian Day School Movement," **An Introduction to Evangelical Christian Education**, edited by J. Edward Hakes (Chicago, Illinois: Moody Press, Inc. 1964), p. 376.

²⁵Paul A. Kienel, "Christian (Day) Schools," **Introduction to Biblical Christian Education**, edited by Werner C. Graendorf (Chicago, Illinois: Moody Press, Inc., 1981), p. 322.

²⁶While most evangelical schools are adamantly creationist, they do not emphasize recent-creation. For example, the Association of Christian Schools International, an interdenominational organization of Christian schools, published a handbook for teachers which attempted to provide a summary of Biblical doctrine for various classroom subjects. The section on life sciences, while definitely creationist, says nothing about the date of creation, nor the interpretation of the Genesis "days." Ruth C. Haycock, **Biblical Truth for School Subjects: Volume III, Science-Mathematics** (Whittier, California: Association of Christian Schools International, 1981), pp. 56-66.

chemical formulae, and incorrectly captioned illustrations.²⁷ These were corrected and a second, corrected printing of 25,000 was completed in July, 1971.²⁸ The Textbook Committee soon began work on a revised edition which was published in July, 1974.²⁹

The revisions included an enlarged preface in which John N. Moore, the book's co-editor, explained the philosophy behind the text. First, he wrote, "science" excludes the subject of origins, because any theory of origins cannot be subject to experimental verification.³⁰ Yet the discussion of origins is a necessary part of a science text because people are interested in both the "what" of the physical universe (true science) as well as the "how and why" of the universe. He then explained in detail the two-model approach to origins.³¹ The creationist model followed by the text includes the biblically-based principle of death and decay as well as the historical reality of the world-wide Noahican Deluge.³² Thus the new preface made explicit what had been implicit in the first edition.

The greatest change within the text was the reorganization of material on human biology. The chapter on "Form and Motion of the Human Body" was retitled "Form and Major Functions of the Human Body." The revised chapter included sections on circulation, digestion, respiration, and excretion, all of which were in another unit in the first edition. The chapter on "Maintenance of the Human Body" in

²⁷John N. Moore, personal Letter, March 6, 1989.

²⁸*Ibid.*

²⁹*Ibid.*

³⁰John N. Moore and Harold S. Slusher, editors, **Biology: A Search for Order in Complexity**, second edition (Grand Rapids, Michigan: Zondervan Publishing Company, 1974), p. xvii.

³¹See above, p. 72-73, for the details of the two-model concept.

³²John N. Moore and Harold S. Slusher, editors, **Biology: A Search for Order in Complexity**, revised edition, (n. 30), p. xx.

the first edition was replaced by "Body Controls and Human Reproduction" in the second. The sections in this chapter on the nervous system and reproduction were enlarged in the revision. "Homeostasis" and "Human Behavior," major sections in the original chapter, became supplemental discussions in the new edition.³³ Other changes involved updating and expanding the bibliographies for each unit, adding a glossary, and enlarging and correcting the index.

These changes improved the text by correcting errors and omissions of the first edition, improving the organization of the material, and explaining its creationist philosophy in detail. The result, however, was still a text which presented only one answer to the creation-evolution question, that of recent-creationism. The text appealed to some, but most found it too religious to qualify as a science book.

By 1975 the Society had sold 36,205 copies of the text and the book was on the state-approved list of public school texts in Georgia, Oregon, Idaho, and Oklahoma.³⁴ However, in 1977 the Indiana State Board of Education had ruled that the book, then in its second edition, was not acceptable for use in the Indiana school systems because of its religious bias.³⁵ After that sales declined to the point where Zondervan decided to end its involvement in the project. Although 56,900 copies had been sold by April,

³³John N. Moore and Harold S. Slusher, editors, **Biology: A Search for Order in Complexity**, revised edition, (n. 25), pp. 310-314. Cf. John N. Moore and Harold S. Slusher, editors, **Biology: A Search for Order in Complexity**, 1970 edition (note 1), pp. 298-308.

³⁴Wayne Frair, "Report of the 1975 Board of Directors Meeting," **CRSQ** 12 (September, 1975) 118-119.

³⁵John N. Moore, editor, second edition, revised, **Biology: A Search for Order in Complexity** (Grand Rapids: Zondervan Publishing House, 1974). Both editions are now of print. Morris gives additional information about the publishing problems in **History of Modern Creationism** (n. 7), p. 199.

1978, the company did not renew its publishing contract, even though the CRS was working on a major revision.³⁶

The revision project began in late 1977 when a "Textbook Revision Committee" consisting of three Board members, Wilbert Rusch, Larry Butler, and Wayne Frair, met to discuss needed revisions.³⁷ Apparently they had been some indication from Zondervan that the company was not interested in publishing the revised text, for George Mott of Mott Media, Inc., attended the meeting. He expressed serious interest in publishing the revised text as a separate book. In May, 1978, the CRS officially asked Zondervan if they were going to continue their publishing contract and the next month the company confirmed their decision to let the biology text and related materials go out of print.³⁸ So the CRS transferred their publishing contract to Mott Media and started to work with them on a new text.

Changes in the text included updating the content, removing Bible references, and "being fair with evolution but favoring creation."³⁹ The book was targeted for both private and public high school biology classes, so Mott planned to utilize legal experts to ensure that the text would be acceptable to the courts. The text would emphasize biology and the origin of living things and de-emphasize the age of the earth,

³⁶Wayne Frair, "Report of the 1978 Board of Directors Meeting," **CRS** 9 15 (September, 1978) 121. Total sales as of March, 1978 were 56,900 copies of the text, 3000 copies of the teacher's manual, 14,000 laboratory manuals, and 2,500 copies of the teacher's laboratory manual. Wayne Frair, "Minutes of the C.R.S. Textbook Revision Committee, 21 April 1978." The original is in the personal files of Wayne Frair, Briarcliff, New York.

³⁷Wayne Frair, "Minutes of the C.R.S. Textbook Revision Committee, 17 December 1977." The original is in the personal files of Wayne Frair, Briarcliff, New York.

³⁸Wilbert Rusch, letter to Robert K. DeVries, Zondervan Publishing House, May 19, 1978. The original is in the personal files of Wayne Frair, Briarcliff, New York. Robert K. DeVries, letter to Wilbert Rusch, June 7, 1978. The original is in the personal files of Wayne Frair, Briarcliff, New York.

³⁹Wayne Frair, "Minutes of the C.R.S. Textbook Revision Committee, 17 December 1977." The original is in the personal files of Wayne Frair, Briarcliff, New York.

the Flood, and geology. The Society's goal was a text which presented a two-model approach to origins by presenting scientific rather than Biblical creationism.⁴⁰

By 1980 nineteen chapters had been written and were in various states of revision.⁴¹ However, court decisions in Arkansas and Louisiana rejected "scientific creationism" as a valid classroom topic. This raised serious doubts about the acceptability of the new text and caused Mott Media to reevaluate the entire project. The book's scientific creationism approach would disqualify it for public school use while the absence of Biblical creationism would restrict its appeal to the private school market. In 1982 Mott Media put the project on hold, even though the CRS continued to work on the book.⁴² Finally in 1984 the effort was terminated when Mott announced that they were not going to publish any more textbooks.⁴³ In 1989 the Society closed the "Textbook Fund" and transferred the balance to the "Book Sales" fund.⁴⁴

Quarterly Anthologies

The next three books published by the CRS were anthologies of **Quarterly** papers. The first, **Why Not Creation?**, contained twenty-five representative papers from Volumes 1-5 (1964-1968). Walter Lammerts, the book's editor, selected the twenty-five

⁴⁰See above, pp. 72-73, for a discussion of the two-model approach to origins.

⁴¹Wilbert Rusch, letter to CRS Board Members, October 23, 1980. The original is in the personal files of Wayne Frair, Briarcliff, New York.

⁴²Mott Media, "BIOLOGY: A SEARCH FOR ORDER IN COMPLEXITY Project Report," April 22, 1982. The original is in the personal files of Wayne Frair, Briarcliff, New York.

⁴³Wayne Frair, "Minutes of the 1985 Board of Directors Meeting," **CRSQ** 22 (December, 1985) 137-140.

⁴⁴David Kaufmann, "Minutes of the 1989 Creation Research Society Board of Directors Meeting," **CRSQ** 26 (December, 1989), 101-102. The minutes did not state the amount of money transferred.

as the best papers published during that time.⁴⁵ These papers presented the recent-creationist viewpoint in ten topics: philosophy, cosmology, thermodynamics, radiometric dating, geology, paleontology, genetics, biochemistry, zoology, and sociology. The second book, **Scientific Studies in Special Creation**, also edited by Lammerts, contained thirty-one papers from the same volumes which he also considered "valuable" for their support of recent-creationism.⁴⁶ These papers dealt with the same topics as the first. There is no essential difference between the books in the quality or subjects of their respective papers.

The third book, **Speak to the Earth: Creation Studies in Geoscience**, reprinted papers from Volumes 6 through 10 (1969-1972) which dealt with geological issues.⁴⁷ The CRS planned to publish a fourth anthology of biology papers, but lagging sales of the geology book caused the Board to postpone the project.⁴⁸ The book has not been published as of 1990.

Monograph Series

In 1979 the Creation Research Society established its own publishing organization, CRS Books, Inc.⁴⁹ To date (1989) CRS Books, Inc., has published three

⁴⁵Walter E. Lammerts, editor, **Why Not Creation? Selected Articles from the Creation Research Society Quarterly Volumes I Through V (1964-1968)** (n. 1), p. 3.

⁴⁶Walter E. Lammerts, editor, **Scientific Studies in Special Creation: Selected Articles from the Creation Research Society Quarterly Volumes I Through V (1964-1968)**, (n. 1).

⁴⁷George F. Howe, editor, **Speak to the Earth: Creation Studies in Geoscience** (n. 1).

⁴⁸In its first year the geology collection only sold about 100 copies. The fourth book would have been titled **Many Separate Kinds: Creationistic Studies in Bioscience**. It was scheduled for release in 1976. Wayne Frair, "Report of the 1975 Board of Directors Meeting," **CRSQ** 12 (September, 1975) 118.

⁴⁹Wayne Frair, "Report of the 1979 Board of Director's Meeting," **CRSQ** 16 (September, 1979) 141.

books, all of which are part of a new CRS monograph series. These books seek to offer recent creationist interpretations of science in keeping with one of the basic goals of the Society: "the complete re-evaluation of science from the theistic viewpoint."⁵⁰

Thermodynamics and the Development of Order, the first monograph of the series, was published in 1981.⁵¹ Edited by Emmett Williams, a CRS Board member since 1970, this book is a collection of ten papers (four **Quarterly** reprints) showing that thermodynamics supports creationism. The individual authors are George Mulfinger, Harold Armstrong, David Boylan, Emmett Williams (three papers), Duane Gish, Ralph Ancil, and Henry Morris. All but Ancil have been CRS Board Members. The book takes the standard creationist approach to thermodynamics. The first law demonstrates that God built a certain amount of energy into the universe at its creation and that amount is fixed.⁵² The second law shows that the universe is "running down," that is, energy is irreversibly flowing in one direction. This may be described in terms of heat flow from hot to cold, or terms of increasing entropy or disorder of the universe.⁵³ This is in keeping with the concepts that God created the universe with a given amount of energy (first law) and that the universe has been running "downhill" ever since creation (second law). In light of this natural flow of energy, creationists argue that order cannot spontaneously arise from disorder. Thus complex, self-replicating molecules necessary for life could not have evolved from simple precursors without intelligent application of energy to overcome the second law.⁵⁴

⁵⁰Walter Lammerts, "Introduction," **CRSQ** 1 (March, 1965) 1-2.

⁵¹Emmett L. Williams, editor, **Thermodynamics and the Development of Order** (n. 2).

⁵²Emmett Williams, "Thermodynamics and Evolution: A Creationist View," **Thermodynamics and the Development of Order** (n. 2), p. 12.

⁵³*Ibid.*, pp. 15-16.

⁵⁴This is the gist of Duane Gish's paper, "The Origin of Biological Order and the Second Law," **Thermodynamics and the Development of Order** (n. 2), pp. 67-90.

True, the earth is an open system in one sense, for it does receive electromagnetic energy from the sun. But, the argument goes, this energy must be directed through some sort of "machine" if the second law is to be overcome. Solar energy, for example, is used to form cellulose in plants, but the "machine" is chlorophyll. Before complex organic molecules existed there was no machine to direct their formation, thus the constraints of the second law could not have been overcome and life could not have evolved.⁵⁵

Henry Morris wrote the concluding paper in which he summarized the creationist implications of the first and second laws of thermodynamics, then illustrated them from the Bible.⁵⁶ He cites Exodus 20:11 ("For in six days the Lord made heaven and earth, the sea, and all that in them is, and rested the seventh day.") as a reference to the first law.⁵⁷ Among passages referring to the second law he lists Matthew 24:35, "Heavens and earth shall pass away."⁵⁸ The Bible does record exceptions to the second law, which are the recorded miracles, such as Jesus changing the water into wine, described in John 2:1-11.⁵⁹ The end of the universe will not be the "heat death," or the uniform distribution of all its energy, promised by the second law. Rather it is God's apocalyptic intervention in natural processes to destroy the existing

⁵⁵Duane Gish, "The Origin of Biological Order and the Second Law" **Thermodynamics and the Development of Order** (n. 2), p. 90.

⁵⁶Henry Morris, "Thermodynamics and Biblical Theology," **Thermodynamics and the Development of Order** (n. 2), pp. 120-141.

⁵⁷*Ibid.*, p. 131.

⁵⁸Henry Morris, "Thermodynamics and Biblical Theology," **Thermodynamics and the Development of Order** (n. 2), p. 133.

⁵⁹*Ibid.*, p. 136.

order and rebuild “new heavens and earth” in which the second law will forever be repealed.⁶⁰

The second volume in the CRS Monograph Series, **Design and Origins in Astronomy**, is a collection of ten papers on astronomy, two of which were originally published in the **Quarterly**.⁶¹ The authors presented in the book are Donald De Young (2 papers), Hilton Hinderliter (2 papers), George Mulfinger, Paul Steidl (2 papers), John Whitcomb (2 papers), Emmett Williams, and Paul Wilt. DeYoung, Mulfinger, and Williams have served on the CRS Board. The opening paper argues that the universe as a whole shows evidence of design.⁶² The fact that observers always find the same chemical elements and physical processes wherever they look is best explained by a common source. Since the universe may be described mathematically, that source must have been rational, that is, the God of Genesis. Further, life exists on earth because of a unique blend of these elements and forces. Clearly earth was designed for life.⁶³

Other papers examine current theories about the origin of the universe, its stability, and expansion. One author rejects the idea of the “Big-Bang,” which is the concept that the universe resulted from an immense “explosion” of energy many billions of years ago.⁶⁴ The paper argues that there is insufficient matter in the universe to

⁶⁰Henry Morris, “Thermodynamics and Biblical Theology,” **Thermodynamics and the Development of Order** (n. 2), p. 141.

⁶¹George Mulfinger, editor, **Design and Origins in Astronomy** (n. 2). The two papers are Donald B. DeYoung and John C. Whitcomb, “The Origin of the Universe,” **CRSQ** 18 (September, 1981) 84-90 and Paul M. Steidl, “Comets and Creation” **CRSQ** 23 (March, 1987) 153-160.

⁶²George Mulfinger, “A Teleological Study of the Universe,” George Mulfinger, editor, **Design and Origins in Astronomy** (n. 2), pp. 1-10.

⁶³**Ibid.**, p. 7.

⁶⁴Donald B. DeYoung and John C. Whitcomb, “The Origin of the Universe,” George Mulfinger, editor, **Design and origins in Astronomy** (n. 2), pp. 11-26.

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Other papers examine current theories about the origin of the universe, its stability, and expansion. One author rejects the idea of the “Big-Bang,” which is the concept that the universe resulted from an immense “explosion” of energy many billions of years ago.⁶⁴ The paper argues that there is insufficient matter in the universe to

⁶⁰Henry Morris, “Thermodynamics and Biblical Theology,” **Thermodynamics and the Development of Order** (n. 2), p. 141.

⁶¹George Mulfinger, editor, **Design and Origins in Astronomy** (n. 2). The two papers are Donald B. DeYoung and John C. Whitcomb, “The Origin of the Universe,” **CRSQ** 18 (September, 1981) 84-90 and Paul M. Steidl, “Comets and Creation” **CRSQ** 23 (March, 1987) 153-160.

⁶²George Mulfinger, “A Teleological Study of the Universe,” George Mulfinger, editor, **Design and Origins in Astronomy** (n. 2), pp. 1-10.

⁶³**Ibid.**, p. 7.

⁶⁴Donald B. DeYoung and John C. Whitcomb, “The Origin of the Universe,” George Mulfinger, editor, **Design and origins in Astronomy** (n. 2), pp. 11-26.

provide enough gravitational attraction to condense it into such an original state. So even if such an explosion occurred, it was a unique event and must be explained by other theories. Further, the "Big-Bang" theory requires that stellar evolution occur over long periods of time, yet astronomers have observed stellar changes happening far more rapidly than expected.⁶⁵ Thus the authors reject the concept of the "Big-Bang" as a viable explanation of the origin of the universe.

Most astronomers agree that the fact that almost all stellar spectra are shifted to the red end of the scale when compared to spectra from stationary sources is proof of an expanding universe. The more distant the stellar source, the greater the shift, an observation that agrees with a uniformly expanding universe such as would result from the "Big-Bang". One author, however, offers several alternative explanations of this phenomenon, none of which require an expanding universe or an initial "Big-Bang".⁶⁶ It could be due, he argues, to gravitational forces, rather than motion of the stars. If the solar system were at the "exact geometric center of the physical universe" then the uniform redshift would be explained by gravity, not motion.⁶⁷ This explanation, however, assumes that the General Theory of Relativity is valid. This assumption contradicts the position of other **CRSQ** writers who have argued that relativity is an invalid concept.⁶⁸

⁶⁵DeYoung and Whitcomb point to rapid changes in Sirius B and color shifts in Betelgeuse as evidence that stellar decay happens far faster than predicted by current theories of stellar evolution. They cite two articles to support their claims: "A Very Rapidly Evolving Star," **Sky and Telescope** 59 (June, 1980) 462, and a non-existent article entitled "Color Changes on a Scale of Centuries" from volume 117 of **Science**. This volume does not contain any such paper, nor do any of **Science** volumes contemporaneous with the **Sky and Telescope** paper.

⁶⁶Donald DeYoung, "The Redshift Controversy," George Mulfinger, editor, **Design and Origins in Astronomy** (n. 2), pp. 41-59.

⁶⁷*Ibid.*, p. 57.

⁶⁸See above, pp. 96-98.

The writer also suggests that the red-shift could be explained as a second-order Doppler effect produced by a light source moving at right angles to the observer. The universe may have an overall angular momentum which would produce such an effect. In any case, the author argues, the redshift does not provide absolute proof for an expanding universe and the "Big-Bang."

The final paper offers a Biblically-based framework for astronomy.⁶⁹ Since the God of the Bible created the universe, scriptural statements provide insight into His creation. Thus astronomers should find evidence for a sudden, recent creation of the universe. They should find that the number of stars, from the human perspective, is infinite.⁷⁰ They will also see that each stellar unit is different, because "star differs from star in glory" (I Corinthians 15:41). Life will exist only on earth, because only earth was designed for life, specifically human life. Finally, they will find that all natural processes should show that the universe is heading toward a state of thermodynamic equilibrium. All of these predictions have been borne out, the author claims, thus the astronomy of the Bible is true.

The latest monograph is **The Argument: Creationism vs. Evolutionism** by Wilbert Rusch, published in 1984.⁷¹ Rusch, one of the Society's original Board Members, explores the philosophical differences between creationism and evolutionism in this short book (59 pages of text). He argues for a Baconian description of the scientific method which involves recognizing a problem, gathering data, generating hypotheses, and experimental testing of these hypotheses.⁷² Such methodology is

⁶⁹Donald DeYoung, "The Redshift Controversy," George Mulfinger, editor, **Design and Origins in Astronomy** (n. 2), pp. 133-151.

⁷⁰Donald DeYoung, "The Redshift Controversy," George Mulfinger, editor, **Design and Origins in Astronomy** (n. 2), p. 135.

⁷¹Wilbert H. Rusch, **The Argument: Creationism vs. Evolutionism** (n. 2).

⁷²*Ibid.*, p. 18.

limited, he claims, to those problems which can be studied, measured, and experimentally analyzed. Therefore the scientific method cannot be applied to much of geology, paleontology, and astronomy since direct observation and experimentation in these areas is impossible.⁷³

Rusch also claims that the acceptance of macro-evolution is a religious decision rather than a scientific one because there is no direct evidence to support the concept that all living forms have developed from a single source. Observation, however, does support the theory of limited genetic variation within groups. This concept, called micro-evolution, is therefore scientifically valid. Limited genetic variation within groups is also in agreement with the Genesis account of God creating life according to "kinds." However, the idea that the kinds were created by God, like macro-evolution, cannot be observed or tested. Thus the two basic explanations of origins, creationism and macro-evolution, are both unprovable and should be treated as religious issues, not scientific topics.

Rusch is one of the few creationist authors to distinguish between creationism in general and Biblical creationism. The former may be presented as a theoretical framework to explain experimental data. The latter requires acceptance of specifically religious concepts, such as the existence of a personal God.⁷⁴ A general creationist, according to Rusch, believes in the existence of a Creator (not necessarily a personal deity) who set in motion the basic laws by which the universe operates and who created living things with the ability for remarkable variation within specific limits.⁷⁵

⁷³Wilbert H. Rusch, **The Argument: Creationism vs. Evolutionism** (n, 2), p. 19.

⁷⁴*Ibid.*..., pp. 27-28.

⁷⁵*Ibid.*..., pp. 26-27.

Rusch offers only brief summaries of the observational evidence for creationism. Paleontology rates two and one-half pages in which Rusch argues that evolutionists, including Darwin, have always been troubled by the concept of design in nature.⁷⁶ He discusses human fossils in two short chapters. In the first he reviews the difficulty of classification based on morphology and argues for two distinct groups: ape-like and human. The second chapter discusses the difficulties created by recent discoveries. Rusch suggests that the humanoid fossils should be grouped in three basic kinds: *Australopithecus africanus*, *Australopithecus robustus*, and *Homo erectus*, and that individual variation be seen as diversity within these kinds.⁷⁷

The last creationist topic Rusch discusses is the age of the earth. He briefly summarizes the assumptions of radiometric dating methods, and discusses the validity of each. Then he presents the general evidences for a young earth and argues that the traditional estimates of the earth's age may be properly questioned. Again he demonstrates his fairness by acknowledging some difficulties of the recent-creation concept. In particular he points to large underground salt domes and extensive coral reefs as problems for this view.⁷⁸

Rusch's final chapter focuses on creationism in public schools.⁷⁹ He argues that since most students are required to attend public schools, science courses should reflect both the diversity of views and the theoretical nature of macro-evolution. At the least, he writes, the existence of alternative theories of origins should be presented

⁷⁶Wilbert H. Rusch, **The Argument: Creationism vs. Evolutionism** (n, 2), pp. 39-41.

⁷⁷**Ibid.**, pp. 42-49.

⁷⁸**Ibid.**, p. 55.

⁷⁹He omits college and university courses from this discussion, since attendance at such schools is not required by law. **Ibid.**, pp. 56-58.

when the topic is discussed. When the concept of biological evolution is discussed, then macro-evolutionary concepts should be presented as theoretical, not absolute.

Other Books

The CRS also distributes **Variation and Fixity in Nature** by Frank L. Marsh who taught biology at Andrews University, Berrien Springs, Michigan, a Seventh-Day Adventist college, and was a member of the Society's first Board.⁸⁰ This book was first published in 1976 by Pacific Press Publishing Association, Mountain View, California, a publishing arm of the Seventh-day Adventist denomination. Currently the CRS is the book's sole distributor.⁸¹

Marsh attempts to show that the observed variations of living things are best explained by the creationist concept of limited change within genetically fixed and distinct groups or "kinds." First he summarizes the difficulty of defining a "species" and then discusses the concept of genetic "barriers" between all major life forms.⁸² These barriers, he maintains, define the "kinds" of Genesis 1.⁸³ The "kinds," in turn, cannot be equated with any single taxonomic unit. In the case of mankind, for example, the "kind" is the same as a "species" while in the case of the dog-kind, the "kind" is the same as "order".⁸⁴ Then he argues that all observable evidence points to

⁸⁰Frank Marsh: **Variation and Fixity in Nature: The Meaning of Diversity and Discontinuity in the World of Living Things, and Their Bearing on Creation and Evolution** (n. 3). See above, p. 48, for more information on Marsh's role in the CRS.

⁸¹In 1980 the CRS Board voted to buy the book from Pacific Press. Wayne Frair, "Report of the 1980 Board of Directors Meeting," **CRSQ** 18 (September, 1981) 133-134.

⁸²Chapter two, "The Species: Real or Imaginary?" discusses the difficulties with the concept of species, while chapter three, "Species and the Genesis Kind," evaluates the concept of "kind" in light of current taxonomic terminology. Marsh, **Variation and Fixity in Nature** (n. 3), pp. 13-41.

⁸³*Ibid.*, pp. 27-28.

⁸⁴*Ibid.*, pp. 34-35.

the existence of genetic limits to the development of all life, extant or extinct, limits which even hybridization cannot cross.⁸⁵

The fossil record shows the same genetic barriers, as seen by the absence of transition forms between the major kinds.⁸⁶ Within the “kinds”, then, there are no limits to potential variation, yet no crossing between the “kinds” is possible. In biological terminology Marsh accepts the concept of micro-evolution (development within genetic limits) while rejecting that of macro-evolution (development of one basic type from another).⁸⁷

Book Sales

What success has the Society's publication efforts enjoyed? Total sales of CRS books have been small as indicated by the few sales figures published in the minutes of the annual meetings:⁸⁸

1980	268
1983	408
1984	467
1985	736
1986	—
1987	—
1988	911
1989	—

Individual sales figures for each book have not been reported on a regular basis, but through 1987 the top sellers were **Why Not Creation?** (798 copies) and **Thermodynamics and the Development of Order** (981 copies). **Thermodynamics** is

⁸⁵Marsh, **Variation and Fixity in Nature** (n. 3), pp. 67-89.

⁸⁶**Ibid.**, pp. 80-86.

⁸⁷**Ibid.**, pp. 92-117. This is also the approach of G. A. Kerkut, **Implications of Evolution** (New York: Pergamon Press, 1960), whom Marsh approvingly quotes on p. 106.

⁸⁸No sales figures were reported for 1986 and 1987.

now in its second printing, and it is apparent that the anthologies outsell the original works. There is no specific sales data on the two monographs.

Although the collected papers may appeal to a wider audience than the **Quarterly**, the small sales figures indicate that the CRS is reaching a limited audience through its book venture. If its best-selling book only sold 981 copies in six years, then CRS Books must be described as a very small operation. Among Oregon's 33 colleges, five universities, and three evangelical seminaries, only one school, Multnomah School of the Bible in Portland, had any of the monograph series.⁸⁹ Apparently the Society's books are reaching the same limited audience as the **Quarterly** and are not impacting the larger community, whether scientific or not. Neither the Society's journal nor its books have achieved any level of acceptability in the scientific community. But what else is the CRS doing to reevaluate science from their theistic viewpoint? What original contributions are they making through their research efforts? This is the subject of the next chapter.

⁸⁹Confirmed by inter-library loan responses to the author's requests.

CHAPTER 5

RESEARCH IN THE CREATION RESEARCH SOCIETY

Theological Context

Creationism postulates the existence of a Creator, so many critics argue that it cannot serve as a philosophical foundation for science. The presence of a Creator, they argue, introduces an unpredictable, non-rational element which invalidates any basis for scientific laws.¹ Thus theologically-oriented philosophy of science cannot be scientific in the modern, rationalistic sense. Further, they claim that creation-science lacks predictive value, since the Creator may interfere with natural processes, and these interventions cannot be predicted. They also claim that creationism fails to explain anything because it “explains everything.”² Finally, it cannot generate a valid research program, since any results would either be subject to the whim of the deity or validated by revelation, not observation.³

The Society, however, argues that a creationist philosophy of science does not eliminate scientific research. They argue that the revealed framework of “history and cosmology” found in Scripture is the only valid key to understanding the relationship

¹This is the argument of Norman D. Newell, “Special Creation and Organic Evolution,” **Proceedings of the American Philosophical Society** 117 (August, 1973) 323-331.

²Harvey Siegel, “Creationism, Evolution and Education: The California Fiasco,” **Phi Delta Kappan** 63 (October, 1981) pp. 98-99.

³Kenneth A. Strike, “The Status of Creation-Science: A Comment on Siegel and Hahn,” **Phi Delta Kappan** 63 (April, 1982) 555-557. The two papers Strike evaluated were Harvey Siegel, “Creationism, Evolution and Education: The California Fiasco,” **Phi Delta Kappan** 63 (October, 1981) 95-97 and George Hahn, “Creation-Science and Education,” **Phi Delta Kappan** 63 (April, 1982) 553-554.

of natural processes.⁴ They affirm both the regularity and the rationality of the physical universe. The God of the Bible is not capricious, they argue, and He has promised regularity in the physical world.⁵ He is, of course, capable of interrupting the regularity of natural processes, but such interruptions, though perhaps spectacular, are extremely infrequent. Indeed, they stand in such stark contrast to the regular processes of creation that they are termed “miracles.” Belief in miracles, the CRS argues, in no way invalidates the investigation of the physical universe nor undermines the scientific acceptability of creationism.

The Creator, the CRS argues, is also rational. Scientists should be able to explain the physical universe in rational, indeed mathematical, statements or scientific “laws.” Such laws are simply general statements of expected results under certain conditions.⁶ While God revealed the general framework of these laws in Scripture, He did not revealed their details. He left their discovery and articulation to mankind through scientific research. Indeed creationists, the Society claims, are the only ones with an adequate philosophical foundation for such research. Only their theology guarantees the regularity and rationality of the physical universe.⁷

From this theological starting point the CRS points to several major areas of legitimate creationist research. The first area is the investigation of the principles or laws behind natural processes.⁸ Study of these laws should enable scientists to predict future events and to test these predictions by experiments. Another important

⁴Henry M. Morris, “Comments from the President,” *CRSQ* 6 (June, 1969) 4, 26.

⁵“As long as the earth endures, seedtime and harvest, cold and heat, summer and winter, day and night will never cease.” Genesis 8:22.

⁶William J. Tinkle, “The Reign of Law,” *CRSQ* 13 (June, 1976) 44-46.

⁷See Duane Gish, “A Decade of Creationist Research,” *CRSQ* 12 (June, 1975) 34-46.

⁸This is the basic premise of William J. Tinkle, “The Reign of Law” (n. 6).

area of CRS research is the geological results of the Flood. Since the Society accepts the Noahic Deluge as a historical event, its effects on the earth's surface may be predicted and investigated.⁹ The third major area of CRS research is evidence of a recent creation. Since God created the earth and presumably the entire universe in the recent past, the CRS expects that data should exist which confirm this.¹⁰ Still another area of their research activity is the stability of the created kinds. All life forms, whether fossil or extant, should conform to the developmental limits outlined in Genesis. These areas form the basis of the Society's research program, a program designed to validate their creationism and vindicate their Creator.

Support of Research

The Creation Research Society has always placed a high priority on original research designed to validate its creationist position.¹¹ In 1965, two years after the CRS was founded, President and Editor Walter Lammerts discussed the need for funds to support creationist research, though no money was immediately forthcoming.¹² Two years later, in 1967, the Board appointed a Research Committee and invited members to submit suggested research projects for possible support.¹³ CRS-sponsored research began that same year.¹⁴

⁹Henry Morris provides a typical example of such investigation in "Sedimentation and the Fossil Record: A Study in Hydraulic Engineering," **CRSQ** 4 (December, 1967) 89-99.

¹⁰One such paper is Robert V. Gentry, "On the Invariance of the Decay Constant over Geological Time," **CRSQ** 5 (September, 1968) 83-85.

¹¹Walter Lammerts, "Introduction," **CRSQ** 1 (March, 1965) 1-2.

¹²Walter Lammerts, "Introduction" **CRSQ** 2 (March, 1966) 11-2.

¹³The Research Committee consisted of George Howe, Chairman, Harold Slusher, John Grebe, Henry Morris (*ex officio* and President), and Walter Lammerts

It is impossible to identify all the research activities which the CRS has supported because it has never published a complete list of such projects.¹⁵ The total amount of money it has given to these efforts also has never been made public. The fact that in 1975 the CRS allocated \$591.38 to six projects and gave \$5000 to a one-year project indicates that the amount available after ten years of fund-raising was small at best.¹⁶ After twenty years the situation apparently has remained the same, for in 1988 the Board funded another project for \$1200.¹⁷ Again, no details of the project were given.

Research Topics

Exactly what constitutes “research” for the CRS? The only extended discussions of the group’s research published in the **CRSQ** show that the Society considers research to be the discovery of anything that could be interpreted to support recent

(*ex officio* and Editor). George Howe, “Announcement of Research Committee Appointment and Research Proposal Requiring Funds,” **CRSQ** 4 (December, 1967) 87-88.

¹⁴The details of this first project, a field study of the thrust-fault in the Empire Mountains near Tuscon, Arizona, are given below, pp. 141-142.

¹⁵Two summaries of CRS research have been published, but even they are incomplete. Duane T. Gish, “A Decade of Creationist Research” (n. 8), 34. Duane T. Gish, “More Creationist Research (14 Years) – Part I: Geological Research.” **CRSQ** 25 (March, 1989) 161-170, and “Part II: Biological Research.” **CRSQ** 26 (June, 1989) 5-12. One CRS report claimed that from 1964 to 1984 the **Quarterly** had published 72 “data-collection” papers and 95 theoretical papers, though no specific listings were given. John Meyers, quoted in David Kaufmann, “Minutes of the 1986 Creation Research Society Board of Directors Meeting,” **CRSQ** 23 (March, 1987) 171-173.

¹⁶The first figure comes from “Research Report,” **CRSQ** 12 (September, 1975) 119-120. The second figure comes from Walter Lammerts, “Creation Research Society Research Committee (RC) Activities: A Decade Review Including Philosophy and Purpose,” **CRSQ** 20 (September, 1983) 125-126. The CRS published no details of this project except Lammerts’ complaint that the workers failed to publish a final report. See below, p. 145.

¹⁷David A. Kaufmann, “Minutes of the 1988 Creation Research Society Board of Directors Meeting,” **CRSQ** 25 (December, 1988) 128-129.

creationism.¹⁸ These discoveries come from literature searches, field investigations, laboratory experiments, and serendipity.¹⁹ Some of these projects were CRS-supported, but most were the result of private individuals working on their own.²⁰ Whatever its source, any paper based upon such discoveries is classified as research. The two published summaries of Society research identified six specific areas of creationist research: geology, genetics, natural selection, taxonomy, general biology (including genetics, natural selection, and taxonomy), and thermodynamics.²¹

Geology and paleontology have always been a major concern with the CRS. When Lammerts first proposed Society-funded research in 1965, he identified two important areas for creationist research efforts: observations which contradicted the evolutionary sequence of the development of living forms and evidence which cast doubt on the traditional sequence of strata deposition.²² Some CRS Board members had already done some work in these areas. Clifford Burdick, for one, claimed to have found fossil pollen in Precambrian strata in the Grand Canyon and human footprints

¹⁸Duane Gish wrote all three summaries: "A Decade of Creationist Research" (n. 7), "More Creationist Research (14 Years)—Part I: Geological Research," **CRSQ** 25 (March, 1989) 161-170, and "More Creationist Research (14 Years)—Part II: Biological Research," **CRSQ** 26 (June, 1989) 5-12.

¹⁹An example of a serendipitous discovery that was classified as research is William Meister's description of a fossilized human sandal print in which were embedded several trilobites. William J. Meister, "Discovery of Trilobite Fossils in Shod Footprint of Human in 'Trilobite Beds' - a Cambrian Formation, Antelope Springs, Utah," **CRSQ** 5 (December, 1968) 97-102. Papers discussing radio-active dating are usually based on literature searches. For example, see Donald DeYoung, "The Precision of Nuclear Decay Rates," **CRSQ** 13 (June, 1976) 38-41. Papers based on field studies are frequently published. A good example is Stuart E. Nevins, "Is the Capitan Limestone a Fossil Reef?" **CRSQ** 8 (March, 1972) 231-248. For a paper based on laboratory work, see Emmett Williams, *et al*, "Deposition of Calcium Carbonate in a Laboratory Solution," **CRSQ** 12 (March, 1976) 211-212.

²⁰Meister's work (n. 19) was an individual effort while Nevins' and Williams' projects (n. 19) were CRS-supported.

²¹Duane T. Gish, "A Decade of Creationist Research," (n. 18) 34-46.

²²Walter Lammerts, "Introduction," **CRSQ** 2 (May, 1965) 1-2.

in Cretaceous strata along the Paluxy River near Glen Rose, Texas.²³ Lammerts himself had already done some work on the stratigraphy question through his study of overthrust faults. He was convinced that, if the traditional explanation could be proven incorrect, the uniformitarian explanation of stratigraphy would be nullified.²⁴

It was probably no coincidence that the first CRS-sponsored research project, announced in 1967, was an investigation of an overthrust in the Empire Mountains of Northern Arizona.²⁵ Two researchers (Clifford Burdick and Harold Slusher, both CRS Board members) were to investigate the supposed overthrust contact line where Permian rock (c. 200 million years old) lay atop a Cretaceous formation (c. 100 million years old).²⁶ By May, 1968, over \$700 of the estimated \$1300 cost of the project had been contributed and the Committee authorized Burdick and Slusher to begin work. They traveled to the site, established a base camp, and spent two weeks exploring the interface of the two strata at all visible points. They investigated the fossils contained in the two strata and concluded that the rocks had been correctly classified, according to evolutionary assumptions. However, they found no physical evidence of any movement of the Permian block over the Cretaceous deposit. In particular they

²³Burdick was working on the fossil pollen project when he joined the CRS Steering Committee in 1963. Walter Lammerts, letter to Clifford Burdick, September 7, 1963. In 1964 Lammerts discussed Burdick's investigations of fossil human footprints in Cretaceous strata along the Paluxy River. Walter Lammerts, letter to Clifford Burdick, March 30, 1964. Both letters are in the University of California, Bancroft Library, Lammerts correspondence collection.

²⁴Walter E. Lammerts, "Growing Doubts: Is Evolutionary Theory Valid?" **Christianity Today** 6 (September 14, 1962) 3-6.

²⁵George Howe, "Announcement of Research Committee Appointment and Research Proposal Requiring Funds," **CRSQ** 4 (December, 1967) 87-88.

²⁶The traditional explanation of overthrusts is given in Robert Compton, **Interpreting the Earth** (New York: Harcourt, Brace, and Jovanovich, Inc., 1977), pp. 332-336.

were looking for such things as ground-up rocks, rock powder, scratches, or lack of smooth jointing between the blocks.

A year later they announced that they had uncovered no evidence of any thrusting. Instead they found sites where sharp projections of the Permian rock fit into deep grooves of the Cretaceous, something that would not be expected if the Permian block had slid over the underlying Cretaceous.²⁷ Burdick and Slusher concluded that the traditional identification of this site as a thrust-fault ignored the physical evidence and was based strictly on the fossil evidence. They did not challenge the concept of thrust-faulting, but recommended that thrust-faults be identified by physical evidence alone without reference to the fossil record and its evolutionary assumptions. Their paper avoided polemics, did not argue against evolution, and made no reference to the Deluge. It gave a dispassionate presentation of the data, including geological maps and photographs, and reached a conclusion which was based on that data.

The next CRS-sponsored research project began in 1970 when the Research Committee voted to support the continuation of Clifford Burdick's earlier research into the existence of fossil pollen in Grand Canyon strata.²⁸ In a previous paper he had reported finding fossil angiosperm and gymnosperm pollen in Precambrian rocks, something which had never been seen before.²⁹ In order to substantiate his claims, the CRS paid for two "recognized palynologists" to review Burdick's work and,

²⁷Clifford Burdick and Harold Slusher, "The Empire Mountains--A Thrust Fault?" **CRSg** 6 (June, 1969) 49-54.

²⁸Larry Butler, "Research Proposal," **CRSg** 6 (March, 1970) 159, 201.

²⁹His original report on this work was "Microflora of the Grand Canyon," **CRSg** 3 (May, 1966) 38-50. See above, pp. 94-96, for the details of and comments on his work.

hopefully, confirm his findings.³⁰ The two, Allen M. Solomon, Director, Pollen Extraction Laboratory, University of Arizona, and Ralph A. Morgan, Projects Geologist, Gulf Research & Development Company of Houston, Texas, collected samples from the same strata as Burdick. Their analysis, however, did not produce any fossil spores. Burdick termed their results "inconclusive" because of "defective technique."³¹ He and others in the Society have continued these investigations with continuing CRS support and claim to have vindicated his original findings. Recently the Society published three papers which summarized the details of this project.³² To date (1989) no additional reports have been published, nor have the published minutes of the annual meetings made any reference to any other work in this area.

Other research projects followed. In 1975 \$591.38 was distributed to six projects, three of which resulted in **Quarterly** papers.³³ In one of these projects the investigator subjected bristle cone seedlings to drought conditions and showed that such

³⁰The two reported their work in Allen M. Solomon and Ralph A. Morgan, "Challenge Taken Up," **Geotimes** 18 (June, 1973) 9-10.

³¹Clifford Burdick, "Progress Report on Grand Canyon Palynology," **CRSQ** 9 (June, 1972) 25-31. See also C. L. Burdick, "Grand Canyon Palynology," **Geotimes** 18 (October, 1973) 15-16. George Howe accurately summarized the details of this initial phase of the fossil pollen project in "Creation Research Society Studies on Precambrian Pollen: Part I—A Review," **CRSQ** 23 (December, 1986) 99-104.

³²George F. Howe, "Creation Research Society Studies on Precambrian Pollen: Part I—A Review" (n. 25), pp. 99-104; George F. Howe and Walter E. Lammerts, "Creation Research Society Studies on Precambrian Pollen—Part II: Experiments on Atmospheric Pollen Contamination of Microscope Slides," **CRSQ** 23 (March, 1987) 151-153; George F. Howe, Emmett L. Williams, George T. Matzko, and Walter E. Lammerts, "Creation Research Society Studies on Precambrian Pollen—Part III: A Pollen Analysis of Hakatai Shale and Other Grand Canyon Rocks," **CRSQ** 24 (March, 1988) 173-182. This last paper includes two pages of microphotographs made with light and scanning electron microscopes. See above, pp. 94-96, for further details of this research.

³³Published minutes seldom list specific amounts allocated to research projects, but \$600 spread among six projects averages to only \$100 per investigation.

stress produced extra growth rings.³⁴ He concluded that generally accepted chronologies based on bristle-cone pine tree growth rings were inaccurate. The second project showed that rapid precipitation of limestone (CaCO₃) was possible under controlled conditions. The workers concluded that this might account for stalactite and stalagmite formations within caves without requiring extended periods of time.³⁵ The third of these projects was a literature search of the published nuclear decay rates for certain isotopes. The researcher found discrepancies in these rates and concluded that extra-nuclear factors such as electrostatic coupling between the nucleus and the surrounding electrons could influence the decay rates of radioactive isotopes. He claimed that the uncertainty of reported half-lives requires a new model of the atom to explain them, and that geochronological data based on such rates were suspect.³⁶

The fact that only three of the six projects resulted in papers showed that CRS research projects were not well-coordinated. Further, some of what was published as research seemed contrived to justify the Society's position.³⁷ Other reports identified as research were little more than accidental discoveries.³⁸ CRS research efforts have ranged from the reasonable to the contrived, a fact which was not lost on the Society's leadership.

³⁴Walter E. Lammerts, "Are the Bristlecone Pine Trees Really So Old?" **CRSQ** 20 (September, 1983) 108-115.

³⁵Emmett Williams, *et. al.*, "Deposition of Calcium Carbonate in a Laboratory Solution" (n. 19), pp. 38-41

³⁶Donald DeYoung, "The Precision of Nuclear Decay Rates" (n. 19), pp. 38-41.

³⁷Saturated solutions of sodium chloride and magnesium chloride were mixed in order to obtain salt as a precipitate, thus circumventing the need for the evaporation of large amounts of water to account for large salt deposits. This work was reported by F. L. Wilcox and S. T. Davidson, **CRSQ** 13 (September, 1976) 87-89.

³⁸William J. Meister, "Discovery of Trilobite Fossils in Shod Footprint of Human in 'Trilobite Beds' - a Cambrian Formation, Antelope Springs, Utah" (note 19), 97-102.

Creation Research Society Laboratory and
Experimental Stations

Although the CRS publicly boasted of the research its members had conducted, the Board recognized that all was not well. The low level of financial support was not nearly as frustrating to the Research Committee as was its inability to coordinate the individual research efforts of workers.³⁹ The Committee felt that more could be accomplished for creationism if it could coordinate research efforts and focus them on a few key topics. However, since individuals did most of the research at their own expense, the Committee was powerless to exert such direct control.

In an effort to coordinate creationist research, the Committee gave a group of creation scientists \$5000 for a one-year study of the formation of sediments in a flood-like environment.⁴⁰ However, though the Committee assigned the topic, they did not control the actual work. So, when the group failed to publish a final report, the Committee concluded that the project was a failure.⁴¹

As a result of this experience, the CRS changed its tactics. In 1981 the Research Committee recommended that the Board establish a permanent "Research Center" operated by several full-time creationist scientists to pursue long-term research projects.⁴² They further recommended establishing a goal of \$1.5 million to build this "Creation Research Society Laboratory" and insure its continual operation. The

³⁹Walter Lammerts, "Creation Research Society Research Committee (RC) Activities" (n. 37), pp. 125-126.

⁴⁰*Ibid.*, pp. 125-126. The **Quarterly** published no details of this project, such as who was involved and when the grant was made.

⁴¹*Ibid.*

⁴²John Meyer, "Creation Research Society Laboratory Project," **CRSQ** 18 (December, 1981) 181-182.

Board accepted the Committee's recommendation and began soliciting donations. One year later the Treasurer announced that \$29,207 had been received and an additional \$66,000 had been pledged.⁴³ In 1983 the CRS bought two and one-half acres of undeveloped land near Chino Valley, Arizona, as the site for the laboratory.⁴⁴ The site is near the research facilities of Northern Arizona University in Flagstaff as well as the Grand Canyon area where the CRS-sponsored palynology research has been conducted.

That same year E. Norbert Smith, a Board member, complicated the picture by offering the CRS three and one-half acres of virgin prairie land near Weatherford, Oklahoma, for another research station.⁴⁵ When the second research site became available, the Committee decided to set aside the idea of one research facility in favor of two "experiment stations." Smith would direct the Grasslands Experiment Station in Oklahoma and George Howe, another Board member would head up the Grand Canyon Experiment Station in Arizona. Temporary research assistants would be hired, but the Directors would receive no pay. These efforts would be financed by interest from the Laboratory Project fund.⁴⁶ In 1983 the CRS Board approved this approach.⁴⁷

⁴³Wayne Frair, "Report of the 1982 Board of Directors Meeting," **CRSg** 19 (September, 1982) 147-148.

⁴⁴Walter Lammerts, "Report on the Search for a Site for Our Research Laboratory," **CRSg** 20 (June, 1983) 68-69.

⁴⁵Walter Lammerts, "Report on the Search for a Site for Our Research Laboratory" (n. 42), pp. 68-69. The site had never been plowed, but had been subject to grazing by cattle for 70 years, according to E. Norbert Smith and Stephen C. Hagberg, "A Report of Activity on the Grasslands Experiment Station for 1983," **CRSg** 21 (September, 1984) 62-65.

⁴⁶The 1985 Treasurer's Report showed \$137,454.92 in this fund. Wayne Frair, "Report of the 1985 Board of Director's Meeting," **CRSg** 22 (December, 1985) 137-139.

⁴⁷Wayne Frair, "Report of the 1983 Board of Directors Meeting," **Ibid.** 20 (September, 1983) 124-125.

Smith began working at the Grasslands Station as soon as the Board accepted his donation and in 1984 he published two reports. In his first paper Smith described a project which extrapolated from controlled laboratory conditions to the chaos of the Flood. He and a student assistant placed layers of salt and fresh water in a 55-gallon aquarium, then placed salt- and fresh-water organisms into their respective layers.⁴⁸ Some organisms survived almost four weeks in the unprotected aquarium. Smith claimed that this showed how fresh- and salt-water creatures could survive the Noahican Deluge. As with the precipitation project described above, this project was contrived in nature and its conclusions highly speculative. In the second paper he gave the results of preliminary plant, animal and soil surveys of the site.⁴⁹ This baseline data will enable researchers to measure changes in the local environment, which seems to be a more reasonable research project than the aquarium work. As of 1989 nothing has been published concerning other projects nor have the Annual Meeting minutes reported anything concerning the Grasslands Station.

The CRS has developed the Grand Canyon Station at a much slower pace. In 1984, one year after they purchased the land, Howe published a general description of the site.⁵⁰ However, it was 1987 before a water well was drilled and the site fenced. Only then did the Board authorize Howe to talk to an architect and a contractor about constructing a permanent building at the station.⁵¹ Two years later, in 1989, these

⁴⁸E. Norbert Smith and Stephen C. Hagberg, "Survival of Freshwater and Saltwater Organisms in a Heterogeneous Flood Model Experiment," **CRSQ** 21 (June, 1984) 33-36.

⁴⁹E. Norbert Smith and Stephen C. Hagberg, "A Report of Activity on the Grassland's Experiment Station for 1983" (note 45), 62-65.

⁵⁰George Howe, "A Trip to the Grand Canyon Experiment Station," **CRSQ** 21 (June, 1984) 9-17.

⁵¹David Kaufmann, "Minutes of the 1987 Creation Research Society Board of Directors Meeting," **CRSQ** 24 (December, 1987) 136-138.

plans were presented to the Board for their consideration.⁵² Although a number of research projects have centered on the Grand Canyon area, no specific work has been done at the research station.⁵³ Whether or not the two stations will ever meet the Society's expectations depends upon one thing: money. Without adequate facilities, staff, and equipment the CRS will not be able to carry on significant work at either site.

Summary

Its founders established the Creation Research Society with a commitment to research and it has maintained that commitment to the present. The results, however, have not always matched the Society's zeal. Early research efforts were haphazard and uncoordinated, and the Society's efforts at control were ineffective. Some of the projects seem contrived, especially those designed to prove the validity of the Noahican Deluge. Some projects, however, produced more convincing results. The work with the pines and their drought-induced growth rings seem to raise significant questions about traditional chronologies based upon growth ring analysis.⁵⁴ Likewise the work on the contact plane of the Empire Mountains overthrust and the Grand Canyon fossil pollen, if accurate, raise reasonable doubt about the traditional explanations of these phenomena.⁵⁵

⁵²David Kaufmann, "Minutes of the 1989 Creation Research Society Board of Directors Meeting." **CRSQ** 26 (December, 1989) 101-102.

⁵³The earliest research in that area was Burdick's fossil pollen work (see note 31). The latest was a preliminary investigation in the absence of micro-evolutionary changes in the fauna of Shiva Temple, a high mesa which the researchers claim is biologically isolated from the canyon's rim. John R. Meyer and George F. Howe, "The Biological Isolation of Shiva Temple," **CRSQ** 24 (March, 1988) 165-172.

⁵⁴Walter E. Lammerts, "Are the Bristlecone Pine Trees Really so Old?" (n. 34).

⁵⁵Clifford Burdick and Harold Slusher, "The Empire Mountains-A Thrust Fault?" (n. 20), and Clifford Burdick, "Microflora of the Grand Canyon" (n. 23).

Has the CRS vindicated their claim that creationism is no barrier to a scientifically acceptable research program? The answer, of course, depends on how one defines "scientifically acceptable." The CRS maintains that its researchers have accurately analyzed the data and correctly interpreted it. Traditional scientists ignore their work, claiming that it is outside mainstream science and thus by definition not scientific.⁵⁶ Which is it? If a "scientifically acceptable" research program is one that is internally consistent with its presuppositions and externally consistent with the data, i.e. accurately reports its observations, then the CRS maintains a valid research program. However, if "scientifically acceptable" means in agreement with the majority opinion of scientists, then the CRS does not have a valid research program. Some of the Society's projects do follow acceptable experimental methodology. However, the trivial nature of many of them and the overall lack of agreement with current scientific opinion make the group's research unacceptable to modern science. The conflict is one of philosophy, not procedure. This, as the next chapter will show, is true of the entire Society.

⁵⁶Kenneth A. Strike, "The Status of Creation-Science: A Comment on Siegel and Hahn." *Phi Delta Kappan* 63 (April, 1982) 555-557.

CHAPTER 6

AN EVALUATION OF THE CREATION RESEARCH SOCIETY

The CRS as a Society

In 1963 the “Team of Ten” founded the Creation Research Society to advance the cause of recent-creationism through scientific research and publication. What, then, has the CRS accomplished over the last twenty-five years? A balanced appraisal of this group and its accomplishments must consider its three major facets. First, the Society claims to be a scientific society. It limits its voting membership to those who have earned graduate degrees in the natural sciences, it sponsors basic research, and it publishes scientifically-oriented papers and books. At the same time the CRS is a recent-creationist group which requires all members to subscribe to a particular interpretation of the Genesis account of creation, including the historicity of the Noahic Deluge. Finally, it is a religious organization which requires all members to accept an evangelical view regarding the deity of Jesus Christ and the necessity of personal salvation from sin. A fair evaluation of the CRS must consider all three aspects of the group.

The CRS as a Scientific Society

The CRS claims to be a scientific society, but does evidence exist to support this claim? If it does, then it will be found in two areas: the scientific status of the Society within the larger scientific community, and the internal work of the group. Scientific standing is hard to measure, but a few benchmarks do exist. For example, have the

leader of the CRS made professional contributions to their respective fields apart from the creation-evolution issue? Publication in standard journals is the standard index of such contributions.¹ Each member of the 1986 Board was asked to provide a copy of the bibliographic information on his scientific publications. Eleven of the fifteen Board members responded.² The total non-creationist papers listed by these eleven are:

1.	Norbert Smith	—	38
2.	Wayne Frair	—	36
3.	David Rodabaugh	—	27
4.	Duane Gish	—	23
5.	David Kaufmann	—	9
6.	Eugene F. Chaffin	—	7
7.	Donald DeYoung	—	7
8.	George Howe	—	7
9.	John Meyer	—	6
10.	Emmett Williams	—	5
11.	Glen Wolfrom	—	5

Most of these individuals have also published other papers in religious periodicals, non-refereed journals, and corporate research reports. These are not included in the above figures.

Members of the current Board have made published contributions to their respective fields. But how significant are these contributions, that is, how frequently are they cited in scientific literature? An investigation was made in the **Science Citations: 1954-1986** to determine how frequently these papers had been cited. Unfortunately **Science Citations** does not discriminate between two authors with the

¹One author argues that no enterprise can be considered scientific until it has generated "a body of scientific literature" from refereed science journals. Kenneth A. Strike, "The Status of Creation-Science: A Comment on Siegel and Hahn," **Phi Delta Kappan** 63 (April, 1982) 555-557. The two papers Strike evaluated were Harvey Siegel, "Creationism, Evolution and Education: The California Fiasco," **Phi Delta Kappan** 63 (October, 1981) 95-97 and George Hahn, "Creation-Science and Education," **Phi Delta Kappan** 63 (April, 1982) 553-554.

²No specific effort has been made to obtain vitæ from former Board members. **Science Citations** lists no references to any publications of the other four Board Members: David Boylan, John W. Klotz, Richard Korthals, and Wilbert Rusch.

same last name and first initial. This can cause confusion, for some non-creationists have the same names and professional interests as do some leading recent-creationists. For example, one study reported that there are two Thomas G. Barnes from Austin, Texas, each of whom has published in astronomy, and two Henry M. Morris who have published in engineering. However, a random check of citations attributed to other Board members indicated that the citations listed were in fact published by the named Board member. So, while some confusion exists, it appears that approximately one-half of the current Board members have made published contributions which have been cited by other workers. Thus it seems reasonable to conclude that most CRS Board members are serious, if not notable, scientists. As individuals they have made professional contributions to the larger scientific community. Based on this the CRS may claim that at least its leadership is accepted within the world of science.

Recognition of the Society's journal is another index of the group's status in the scientific community. Simply stated, the **Creation Research Society Quarterly** is not recognized as a scientific periodical by most science indexing services. The only such index which includes the journal is **Biological Abstracts**.³ Further, the Library of Congress classifies the **Quarterly** as a Bible-Science publication rather than a scientific periodical.⁴ Few libraries even subscribe to the journal. Of the 165 libraries covered by the Oregon Regional Union List of Serials, only five subscribe to it, and all

³The first reference to the **Creation Research Society Quarterly** in **Ulrich's International Periodicals Directory** is in the 16th edition, 1975-1976. This entry indicates that **Biological Abstracts** was already indexing the **Quarterly**. The only other indexing service which includes the **Quarterly** is the **Christian Periodical Index** which started indexing it in 1976.

⁴The Library of Congress has assigned the **Quarterly** a BS (Bible and Science) classification rather than a QH (biological science) classification or Q (general science).

of them are religious institutions.⁵ The scientific community does not recognize the **CRSQ** as a scientific publication. If judged by the scientific establishment's acceptance of the CRS, then the group fails to qualify as a scientific society.

But does the CRS qualify as a scientific society by virtue of the fact that it "does science"? If "doing science" means the experimental investigation of the physical world to test specific hypotheses and formulate conclusions, then the answer is affirmative. Some CRS people are doing science, although not as many as the Society claims.⁶ Examples of good science include geological field work seeking physical evidence for thrust-faulting, field examination of petrified trees, and investigations regarding fossil pollen.⁷ In each of these projects the workers carried out detailed field studies or experimental work which centered on significant issues regarding traditional scientific concepts. These men reported their data and interpreted it in light of their recent-creationist assumptions. They avoided polemics, argumentation, and

⁵The five libraries are Columbia Christian College, Portland; George Fox College, Newberg; Multnomah School of the Bible, Portland; Western Baptist College, Salem; and Western Evangelical Theological Seminary, Oregon City.

⁶A number of activities that the CRS terms "research" have not involved experiments, field investigations, or similar efforts. See the lists provided by Duane T. Gish, "A Decade of Creationist Research," **CRSQ** 12 (June, 1975) 34-46, "More Creationist Research (14 Years)—Part I: Geological Research" **CRSQ** 25 (March, 1989) 161-170 and "More Creationist Research (14 Years)—Part II: Biological Research," **CRSQ** 26 (June, 1989) 5-12. See above, pp. 136-149, for the details of the Society's research program.

⁷The work on thrust-faults was reported by Clifford Burdick and Harold Slusher, "The Empire Mountains--A Thrust Fault?" **CRSQ** 6 (June, 1969) 49-54. The petrified tree work was done by Harold G. Coffin, "Research on the Classic Joggins Petrified Trees," **CRSQ** 6 (June, 1969), 35-44. The fossil pollen work is summarized in three papers: George F. Howe, "Creation Research Society Studies on Precambrian Pollen: Part I - A Review," **CRSQ** 23 (December, 1986) 99-104; George F. Howe and Walter E. Lammerts, "Creation Research Society Studies on Precambrian Pollen - Part II: Experiments on Atmospheric Pollen Contamination of Microscope Slides," **CRSQ** 24 (March, 1987) 151-153; and George F. Howe, Emmett L. Williams, George T. Matzko, and Walter E. Lammerts, "Creation Research Society Studies on Precambrian Pollen - Part III: A Pollen Analysis of Hakatai Shale and Other Grand Canyon Rocks," **CRSQ** 24 (March, 1988) 173-182.

name calling. These papers show that CRS workers have done serious scientific work, albeit from radically different presuppositions than traditional scientists employ.

Not all CRS research efforts qualify as science. For example, some work relating to the supposed activity of the Noahican Deluge seems contrived.⁸ Other work lacks significant purpose or offers highly speculative conclusions.⁹ Still other things that the CRS identifies as research seem to be nothing more than serendipitous discoveries rather than the result of planned effort.¹⁰ Some CRS work is science, but much of what the Society does is not. Unfortunately the group's leadership, especially the **CRSQ's** editorial staff, do not distinguish between the good and the bad. Based on this criterion, the group may be called a scientific society, but one which needs to re-examine its commitment to scientific excellence in all its efforts. However, no matter what levels of excellence it achieved, the scientific community will never accept the Society as a member. The CRS operates from a completely different set of presuppositions which have been rejected by the scientific community but embraced by some within the creationist community. While it might technically qualify as a scientific society because of the non-creationist work of its members and the scientific papers it publishes, the larger scientific community does not and probably never will recognize it as a bona fide scientific society.

⁸One such project showed that fresh- and salt-water organisms survived up to four weeks in a 55-gallon aquarium in which fresh water was layered over salt water. The authors claimed that this showed how similar organisms could have survived the Noahican Deluge. E. Norbert Smith, and Stephen C. Hagberg, "Survival of Freshwater and Saltwater Organisms in a Heterogeneous Flood Model Experiment" **CRSQ** 21 (June, 1984) 33-36.

⁹An example of this type of research is the project that precipitated calcium carbonate from brine solutions, then claimed that this is how large salt domes may have been formed by the Deluge. Wilcox, F. L. and Davidson, S. T. "Experiments on Precipitation Brought about by Mixing Brines." **Creation Research Society Quarterly** 13 (September, 1976) 87-89.

¹⁰One such discovery classed as research is an apparent fossil human footprint which contains a trilobite. See William J. Meister, "Discovery of Trilobite Fossils in Shod Footprint of Human in 'Trilobite Beds'— a Cambrian Formation, Antelope Springs, Utah," **CRSQ** 5 (December, 1968) 97-102.

The CRS as a Creationist Society

The Society's founders correctly anticipated that they would have their greatest impact within the creationist community. Lammerts, for one, wrote that the goal of the CRS was not to convince evolution-oriented scientists of the validity of creationism, but to provide them with new information that challenges their assumptions. The Society's main goal, according to Lammerts, was to show educators, pastors, and laymen that recent-creationism is consistent with the facts of both science and Scripture, and that the position may be held without shame or apology.¹¹

The CRS has fulfilled these goals, especially within the strict-creationist part of the larger creationist community.¹² The **Quarterly** provides technical information which supports recent-creationism, while CRS members have provided personal encouragement for creationist causes.¹³ More importantly, the Society gives several kinds of symbolic support to this community.¹⁴ First, since its voting members all hold advanced degrees in science, recent-creationists point to the CRS as proof of the academic respectability of their position.¹⁵ Further, the Society is accepted by these people as a bona-fide scientific society. As such it symbolizes for them the scientific

¹¹Walter Lammerts stated this goal in "Introduction," **CRSQ** 1 (March, 1965) 1-2.

¹²Most other creationists do not accept recent-creationism as reasonable, either scientifically or biblically. See, for example, Davis Young, **Creation and the Flood** (Grand Rapids, Michigan: Baker Book House, 1977).

¹³Since the CRS does not take part in any political or promotional activity, such support comes from individual members. Walter Lammerts, "The Creationist Movement in the United States: A Personal Account," **Journal of Christian Reconstruction** 1 (Summer, 1984) 49-63.

¹⁴Sociologist Vernon Bates discusses this aspect of the Creation Research Society's role in the creationist movement in his dissertation, "Christian Fundamentalism and the Theory of Evolution in Public School Education: A Study of the Creation Science Movement" (Ph.D. dissertation, University of California at Davis, 1976), pp. 118ff.

¹⁵Vernon Bates, "Christian Fundamentalism and the Theory of Evolution in Public School Education: A Study of the Creation Science Movement" (note 14), p. 121.

acceptability of recent-creationism. This gives creationists what they take as proof of their position's professional acceptability. One recent-creationist leader cited the existence of the CRS as proof that its members were accepted scientists:

[Creation scientists] are not nuts or wierdos as the evolutionists would have you believe, but they are dedicated scientists who do research and belong to a scientific society, the Creation Research Society, that promotes creation science research and publication.¹⁶

These creationists either ignore the fact that the scientific community uniformly rejects the CRS as a valid scientific society, or explain this rejection as another attack by evolutionists on creationists.¹⁷

The **Quarterly** also represents "official," bona fide science to recent-creationists since it includes "authoritative scientific articles on Biblical creationism and catastrophism."¹⁸ It is, they claim, "solid science." Recent-creationists point with pride to the journal as supportive of their position, even when they do not have the training to understand much of what it publishes. Thus the CRS plays a major role within recent-creationism by providing what these creationists consider evidence of the scientific and academic respectability of their view. Regardless of how the scientific community evaluates the CRS, the creationist community accepts it as a full-fledged scientific society and has drawn significant support from it.

The Society's founders anticipated both its acceptance by the creationist community and its rejection by the scientific community. In 1971, for example, George Howe wrote that the best work of the CRS "will be with those already committed to a

¹⁶Jean Sumrall, one of the founders of the Bible-Science Association, in an interview cited by Bates, "Christian Fundamentalism and the Theory of Evolution in Public School Education" (Note 14), p. 122. Henry Morris claims that the number of voting members in the CRS shows that "literally thousands of scientists" reject evolution. See Henry Morris, **Scientific Creationism (General Edition)** (San Diego, California: Creation-Life Publishers, 1974), p. 8.

¹⁷Bates, "Christian Fundamentalism and the Theory of Evolution in Public School Education" (Note 14), p. 119

¹⁸Comments from interviews with recent-creationists, **Ibid.**, p. 124.

Christian viewpoint.”¹⁹ Howe was correct, for the Society's goal of reevaluating science from the theistic viewpoint makes sense only to those already committed to that position. Thus the Society's religious dimension is vital to its functioning.

The CRS as a Religious Society

In the final analysis the CRS pursues its reevaluation of science from a theistic viewpoint because it is basically a religious group. Members are asked to make a religious commitment to the specific doctrines of the inerrancy of Scripture and the deity of Christ. Further, they are required to accept a specific interpretation of the Old Testament account of creation. Because the Bible is inerrant, the CRS appeals to it as the final authority in all matters, scientific and theological.²⁰ Thus there is a strong religious tone to many of the **Quarterly's** papers.

This commitment to the doctrine of inerrancy is the key to understanding the Society. First of all, it was the basic motivation for starting the CRS. It was clear to the founders that the inspired Word of God taught recent-creationism. Since this teaching came from the inerrant Scriptures, it must be true. Therefore, if evolution or any other view which challenged recent-creationism be correct, the Scriptures are wrong. The CRS founders decided to form the Society when the American Scientific Affiliation moved away from a strict view of inerrancy.²¹ The problem was not the ASA's refusal to challenge evolution, but their willingness to question the literal

¹⁹George Howe, letter to Walter Lammerts, March 16, 1971, University of California, Berkeley, California, Bancroft Library, Lammerts Correspondence Collection.

²⁰See above, pp. 65-67, for the specific details.

²¹See above, pp. 18-21, for details of this shift.

interpretation of the Genesis account of creation. One cannot, according to the CRS, have evolution and an inerrant Bible.²²

Religion also played a major role in the creationism of the Society's founders, and it is still a major force in the group. The Society's evangelical Christianity supports its creationism by providing its philosophical foundation. The CRS does not, however, use creationism to support religion by providing an apologetic for evangelical Christianity. Aside from the presidential remarks of Henry Morris, specific Christian teachings are not presented in the **Quarterly's** papers.²³ Readers are not asked to make a spiritual conversion or moral change because of some evidence favoring creationism, nor is the Bible discussed outside of a scientific context. But the underlying support of the Society's position is still its commitment to the inspiration of the Bible and their literal interpretation of Genesis. Nowhere is this more apparent than in the **CRSQ**.

The **Quarterly**

The **Creation Research Society Quarterly** is the Society's chief vehicle to achieve its goals. This journal supports the CRS and the recent-creationist movement in several ways. It provides a medium for recent-creationists to discuss their diverse interpretations of various phenomena, probe apparent inconsistencies within other creationist positions, and publish the results of investigations into data which seem to fit their viewpoint better than the evolutionary one. It is the only "technical" journal devoted to this topic in the United States. It has also encouraged recent-creationists outside the Society by symbolizing the scientific acceptability of their position.

²²Henry Morris even argues that the basic message of evangelical Christianity, the Gospel, is based on the concept of creationism. Henry Morris, **A History of Modern Creationism** (San Diego, California: Master Book Publishers, 1984), pp. 255-257.

²³See above, pp. 71-73, for the discussion of Morris's writings.

The CRS founders, however, intended the **Quarterly** to be more than a symbol for the encouragement of recent-creationists. They wanted it to be a bona-fide scientific journal, presenting the technical side of recent-creationism. Has the journal fulfilled this goal? It is the only recent-creationist source of technical information, and it is the second-oldest creationist publication in existence. Its authors argue the various aspects of recent-creationism, present the results of their research, and carry on the search for additional data supporting their position. The **CRSQ** is recent-creationism's most important publication and only technical journal. But it falls short of qualifying as a scientific journal in the traditional sense.

If, as some suggest, science progresses by rigorous evaluation of ideas and rejection of those that do not fit the data, then science journals should provide a medium for such debate.²⁴ No one would expect the **Quarterly** to debate the validity of evolution, but discussion of various creationist views would seem to fit the scope of this journal if it is "scientific" as most professionals define the term. Though its recent editors have not permitted such debate, one CRS founder wanted the journal to include such discussions.

The **Quarterly's** first editor, Walter Lammerts, argued for debates of this nature, claiming that "only by candid exchange of opinions [on different versions of creationism] can progress be made."²⁵ Subsequent editors, however, have not been so

²⁴Kenneth A. Strike, "The Status of Creation-Science" (Note 1), p. 556.

²⁵Walter E. Lammerts, "Editorial Comments," **CRSQ** 4 (March, 1968) 119. The book in question was by Donald W. Patten, **The Biblical Flood and the Ice Epoch** (Seattle: Pacific Meridian Press, 1966). Earlier he gave his support to such debates when he wrote an editorial introduction to a paper which argued against a recent creation. Lammerts stated that the editors were "indebted" to the author for his "fine summary" of the evidence for a long-term formation of the limestone. Those who hold to a young earth, he wrote, cannot lightly dismiss this evidence, and he hoped others "will continue the research suggested in this critique and reply." Walter Lammerts, Introduction to "Critique of 'Is the Capitan Limestone a Fossil Reef?'" **CRSQ** 10 (March, 1974) 237.

open, and the journal has published only one such exchange.²⁶ This lack of scholarly debate is a serious weakness of the **Quarterly**. Research and interpretation of data frequently lead to various opinions, and, in a community of scientists, these opinions are sorted out in private, public, and published debates, not by arbitrary editorial decisions. However, the **Quarterly** supports recent-creation to the complete exclusion of all other viewpoints.

Editor Emmett L. Williams, took a small step to correct this situation. Beginning in 1987 he introduced what he called "Mini-symposia" in which several papers are presented on a given topic and the authors respond in print to specific questions from other creationists who have studied the issue. The first such mini-symposium dealt with "Creationist Interpretations of Chemical Organization in Time and Space," and consisted of several short papers with brief replies to a few questions. The initial symposium was quite limited, covering two pages in the **Quarterly**, but the question-and-answer section was the first published exchange of opinions since 1974.²⁷ The second symposium dealt with "Orogeny" and was more extensive, covering thirty-two pages.²⁸ The papers presented diverse recent-creationist explanations of the origin of mountains, and the question-and-answer section provided an extended discussion of

²⁶Stuart Nevins, "Is the Capitan Limestone a Fossil Reef?" **CRSQ** 8 (March, 1972) 231-248; Daniel E. Wonderly, "Critique of 'Is the Capitan Limestone a Fossil Reef?' by Stuart Nevins," **CRSQ** 10 (March, 1974) 237-241; and "Reply to Critique by Daniel Wonderly," Stuart Nevins, **Ibid.**, 241-244. See above, pp. _____ for a discussion of these papers.

²⁷"Mini-Symposium on Creationist Interpretations of Chemical Organization in Time and Space," **CRSQ** 22 (March, 1986) 157-158. In 1974 Stuart Nevins and Daniel Wonderly debated whether or not the Capitan limestone was deposited rapidly or over a long period of time. See Note 26 for details of these papers.

²⁸Glen R. Morton, "Mountain Synthesis on an Expanding Earth," **CRSQ** 24 (September, 1987) 53-61; Donald W. Patten, "Mountains—A Tidal (Astronomical Flyby) Phenomenon," **Ibid.** 61-69; Bernard E. Northrup, "Mountains, Meteorites and Plate Tectonics," **CRSQ** 24 (December, 1987) 125-129; William Waisgerber, "The Mechanisms for Mountain Building From a Creationist Perspective Are Not Yet Understood," **Ibid.** 129-136.

these views. This has been the longest, most detailed exchange published in the **Quarterly** to date, even though all participants were recent-creationists.

Traditional science journals are characterized by wide-ranging debates over various positions within a given field. The “Mini-symposia” indicate that the Editor is attempting to make the publication more open to diverse opinions. The absence of such openness lessens the credibility of the Society’s claim to be a “scientific” society, and that identification is foundational to the CRS. Whether or not the conservative attitude of the CRS leadership will permit such a change remains to be seen. The Society’s official support of recent-creationism suggests that any move toward a more open stance seems unlikely.

Summary

The CRS has influenced the recent-creationist movement in two ways. It has become a symbol for the creationist community of the scientific acceptability of this view, in spite of the fact that the larger scientific community has rejected both the idea and the Society. More importantly, though, the CRS catalyzed a major portion of the recent-creationist movement by bringing together individuals who were to play a major role in other, more politically active creationist organizations. Henry Morris and Duane Gish, two of the most publicly vocal recent-creationists, began their association in the CRS. Morris’s dissatisfaction with the Society’s low-key approach to the promotion of creationism was behind his decision to help start Christian Heritage College and the associated Creation-Science Research Center (CSRC).²⁹ When the CSRC split from the college, Morris and Gish, who had joined him, stayed with the school and began the Institute of Creation Research (ICR). From this base they launched a program of public debates and lectures to promote recent-creationism

²⁹See above, pp. 54-59, for details of the ICR, its predecessor, the Creation Science Research Center, and Morris’s association with both.

which has made the ICR the most visible of all the recent-creationist organizations.³⁰ The CRS can take much of the credit (or blame) for indirectly bringing this about.

Paradoxically one strength of the Creation Research Society is its strict creationist position. The Society's Statement of Belief provides a definite position from which members evaluate their world. Those outside the Society and, more importantly, those inside it know exactly where it stands on the issue of origins. Thus the group is able to take a firm position on major issues and avoid most of the internal wrangling that created problems for other creationist organizations.

Further, the CRS has benefitted from the recent popularity of the conservative evangelicalism that supports their recent-creationism. In the 1970's only a small number of evangelicals identified themselves as fundamentalists, but by the 1980's a new and much more popular fundamentalism developed.³¹ The political agenda of this modern fundamentalism includes the opposition to the teaching of biological evolution in the public schools. This resurgent fundamentalism is a significant basis of support for the Creation Research Society. There is every reason to assume that this popular base of strict creationism will remain stable or even increase.

The CRS, however, needs to tap into this base of support if it is to expand its work, or even maintain its current level of activity. But to do this the group needs to acknowledge the diversity of views that exist among creationists who could otherwise subscribe to the Statement of Belief. For example, those who diverge from the twenty-four hour interpretation of the Genesis days and the concept of a recent creation may join the CRS, since neither position violates the Statement. The **Quarterly**, however, will not publish papers which advocate these views. If the Society's journal is closed

³⁰Dorothy Nelkin, **The Creation Controversy: Science or Scripture in the Schools** (New York:L W. W. Norton & Company, 1982), pp. 80-83, 84-87.

³¹George M. Marsden, **Fundamentalism and American Culture: The Shaping of Twentieth-Century Evangelicalism, 1870-1925** (Oxford: Oxford University Press, 1980), p. 228.

to creationists who hold these positions, they have little reason to join. Were the CRS to drop its restrictive interpretation of the Statement of Belief and recognize that other creationist positions are compatible with it, the group could appeal to the wider creationist community. The Society's position statement has provided strength to the group. However, their restrictive interpretation of the Statement has turned this strength into weakness. This may prove to be the group's undoing.

A related problem is that the Society assumes that its interpretation of Scripture is a revealed truth, so members must be in complete agreement with its position.³² Their approach to Genesis ignores many basic concepts of Biblical (indeed, literary) interpretation which are recognized and employed by most other conservative evangelical scholars.³³ This assumption of authority on behalf of only one interpretation of Genesis is thus another weakness of the Society. It is one thing to hold a position on a given issue, but it is another to judge all alternative views as erroneous and refuse to discuss them. The CRS could allow such discussions without compromising their position, but there is no indication that they are willing to consider such an approach.

This unwillingness to discuss other creationist views and the insistence that they alone know the truth have alienated the Society from the larger creationist

³²This is discussed at length in William Duke, "The American Scientific Affiliation and the Creation Research Society: The Creation-Evolution Issue" (Ph.D. dissertation, Southwestern Baptist Theological Seminary, Fort Worth, Texas, 1982), p. 130 ff; and Edward Morgan, "A Biblical and Theological Critique of Scientific Creationism" (Ph.D. dissertation, Southern Baptist Theological Seminary, New Orleans, Louisiana, 1983), p. 160 ff.

³³For an excellent discussion of interpretative principles by leading conservative evangelical scholars see Earl D. Radmacher and Robert D. Preus, editors, **Hermeneutics, Inerrancy and the Bible**, Grand Rapids, Michigan: Zondervan Publishing House, 1984. A recent summary of the problems inherent in the Society's interpretation of Genesis is given by Bruce Waltke, "The first Seven Days: What is the Creation Account Trying to Tell Us?" **Christianity Today** 32 (August 12, 1988) 42-46.

community.³⁴ This separation is welcomed by some within the CRS, but many creationists outside the group see it as self-defeating.³⁵ The creationist community is aware of the Society. However, they are not supporting it, as demonstrated by the group's small membership and limited income. This has restricted the Society's efforts to support creationist research and publication.

If the CRS is going to increase its effectiveness, then it must abandon its crusade mentality and expand its base of support among other creationists. This can be accomplished without compromising the Society's basic position as defined in the Statement of Belief. The problem is not their position, but their interpretation of that position. The CRS could increase its support within the creationist community by opening itself to those who accept the group's creationist position but who reject the Society's rigid views of a recent creation and a 24-hour interpretation of the Genesis days. Such a move would not contradict the desires of the Society's founders nor the Statement of Belief. Henry Morris has decried the failure of the original Board to commit the CRS to recent-creationism, but the founders had a larger view of their purpose.³⁶ Unless the Society returns to that original view and accepts all who can agree with their official position, its effectiveness will be severely limited and its continued existence perhaps jeopardized.

The CRS has played a significant role within the creationist community. It provides direct support for its members in terms of opportunity for publication and

³⁴Edwin A. Olson, "Hidden Agenda Behind the Evolutionist/Creationist Debate." **Christianity Today** 35 (April 23, 1982) 26-30.

³⁵Bill Durbin, "How it All Began: Why Can't Evangelical Scientists Agree?" **Christianity Today** 32 (August 12, 1988) 31-41.

³⁶Henry Morris, **A History of Modern Creationism** (note 22), pp. 191-192. Walter Lammerts, one of the Society's founders, encouraged debates over various creationist views within the Society. See note 21. R. Laird Harris, another of the founders, helped draft the Statement of Belief and whole-heartedly supported it, although he held to the day-age interpretation of Genesis. See above, pp. 46-48.

financing of research. The Society also symbolizes the scientific acceptability needed by the creationist community to assure themselves that recent-creationism is a valid scientific concept. The need for this acceptability will continue as long as creationists argue their position on scientific grounds. Whether or not the CRS continues to provide such acceptability or is replaced by another organization, it has played a major role in recent-creationism. Without the Creation Research Society the modern creationist movement would not be what it is today.

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APPENDICIES

APPENDIX I

Creation Research Society Board Members

Appendix I
Creation Research Society
Board Members

Board members serve from their election in the Spring to the next annual meeting. Those listed as serving in 1990 are the current members.

Thomas Barnes	
1963	1982
Clifford Burdick	
1963	1986
Duane Gish	
1963	1990
John Grebe	
1963	1974
R. Laird Harris	
1963	1965
Walter Lammerts	
1963	1978
Karl Linsenmann	
1963	1975
Frank Marsh	
1963	1968
Edwin Monsma	
1963	1965
John Moore	
1963	1987
Henry Morris	
1963	1983
Wilbert Rusch	
1963	1990

Harold Slusher	
1963	1984
William Tinkle	
1963	1979
David Warriner	
1963	1965
Willis Webb	
1963	1965
Paul Zimmerman	
1963	1968
Bolton Davidheiser	
1966	1969
Douglas Dean	
1966	1969
George Howe	
1966	1990
Richard Korthals	
1966	1987
Harold Armstrong	
1970	1986
Larry Butler	
1970	1974
Wayne Frair	
1970	1990
Emmett Williams	
1970	1990
John Meyer	
1975	1990
George Mulfinger	
1975	1990

APPENDIX II

Officers and Editors of the Creation Research Society

Appendix II

Officers and Editors of the Creation Research Society

1. President

1963-1967	– Walter E. Lammerts
1967-1973	– Henry M. Morris
1973-1977	– Thomas G. Barnes
1977-1983	– George F. Howe
1983-1986	– Wilbert H. Rusch
1987-1990	– Wayne Frair

2. Vice-President

1967-1969	– George F. Howe
1970-1972	– Larry Butler
1973-1981	– Emmett L. Williams
1984-1985	– George F. Howe
1986	– Wayne Frair
1987-1990	– George F. Howe

3. Secretary

1963-1972	– William J. Tinkle
1973-1985	– Wayne Frair
1986-1990	– David A. Kaufman

4. Membership Secretary

1968-1984	– Wilbert H. Rusch
1985-1990	– Glen W. Wolfrom

5. Treasurer

1963-1967	– Wilbert H. Rusch
1968-1984	– Richard G. Korthals
1985-1986	– John W. Klotz
1987-1990	– John R. Meyer

6. Editor

1963-1968	– Walter E. Lammerts
1968-1973	– George F. Howe
1973-1983	– Harold L. Armstrong
1984-1987	– Emmett L. Williams
1988-1990	– Donald DeYoung

APPENDIX III
Science Citations Data

APPENDIX III

Science Citations Data

<u>1955–1964</u>	<u>Papers/Books</u>	<u>Citations</u>
Harold L. Armstrong	29	61
Thomas G. Barnes	1	1
Wayne F. Frair	1	6
Duane T. Gish	16	42
John J. Grebe	2	2
Walter E. Lammerts	7	11
Frank L. Marsh	2	2
Henry M. Morris	1	1
William J. Tinkle	1	3
<u>1964–1969</u>	<u>Papers/Books</u>	<u>Citations</u>
Harold L. Armstrong	29	47
Thomas G. Barnes	3	3
Bolton Davidheiser	1	1
Wayne F. Frair	1	1
Duane T. Gish	11	45
John J. Grebe	2	2
George F. Howe	3	12
Walter E. Lammerts	9	12
Frank L. Marsh	3	8
Henry M. Morris	2	3
William J. Tinkle	1	2
Emmett L. Williams	3	12
<u>1970–1974</u>	<u>Papers/Books</u>	<u>Citations</u>
Harold L. Armstrong	13	22
Thomas G. Barnes	7	22
Bolton Davidheiser	1	1
Wayne F. Frair	2	2
Duane T. Gish	17	67
John J. Grebe	1	1
George F. Howe	2	4
Walter E. Lammerts	5	11
Frank L. Marsh	1	3
John R. Meyer	1	2
John N. Moore	2	2
Henry M. Morris	4	9
E. Norbert Smith	2	2
Emmett L. Williams	5	17

<u>1975-1979</u>	<u>Papers/Books</u>	<u>Citations</u>
Harold L. Armstrong	11	18
Thomas G. Barnes	21	99
Wayne F. Frair	2	21
Duane T. Gish	9	43
George F. Howe	1	1
David A. Kaufmann	3	4
Walter E. Lammerts	4	4
Frank L. Marsh	1	1
John R. Meyer	4	6
E. Norbert Smith	19	58
Emmett L. Williams	3	22
Glen Wolfrom	2	3
<u>1980-1984</u>	<u>Papers/Books</u>	<u>Citations</u>
Harold L. Armstrong	9	13
Thomas G. Barnes	24	175
Bolton Davidheiser	3	4
Wayne F. Frair	18	58
Duane T. Gish	13	36
John J. Grebe	1	1
George F. Howe	1	2
David A. Kaufmann	1	4
Walter E. Lammerts	11	13
Frank L. Marsh	2	2
John R. Meyer	2	3
Henry M. Morris	4	27
E. Norbert Smith	34	121
Glen Wolfrom	3	6
<u>1985</u>	<u>Papers/Books</u>	<u>Citations</u>
Thomas G. Barnes	10	35
Wayne F. Frair	6	4
Duane T. Gish	4	7
Walter E. Lammerts	1	1
Frank L. Marsh	1	1
Henry M. Morris	5	9
E. Norbert Smith	24	26
Glen Wolfrom	1	1
<u>1986</u>	<u>Papers/Books</u>	<u>Citations</u>
Thomas G. Barnes	7	40
Wayne F. Frair	3	2
Duane T. Gish	4	8
David A. Kaufmann	1	1
Walter E. Lammerts	2	2
Henry M. Morris	5	5
E. Norbert Smith	18	23
Glen Wolfrom	1	1

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