



Creation Matters

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The Species Problem

by Wilbert H. Rusch, Sr.

Note: This article is taken from Dr. Rusch's informative book entitled Origins: What Is at Stake? published by CRS Books in 1991. He provides a needed review of the species concept in biology and discusses it in light of creationist thinking. Interestingly, at the time this book was published, the term "baramin" was not widely used and understood by creationists. The accompanying article by Dr. Frair illustrates how "baraminology" is catching on. Please note the special offer for Dr. Rusch's books elsewhere in this issue.

The subject of species is germane to the entire matter of origins because of the importance of the meaning of "kind." This word is used in Genesis as the basic unit of creation for the various forms of life. This section does not exhaust the subject of the problems involved in the use of the term *species*. It rather attempts to explore the scope of the whole concept, and suggest some ground

rules for classifying organisms as to their species, as well as noting some of the problems associated with them.

The Position Of Species In the Hierarchy

The word **species** as it is used today, represents the second last rung on the biological ladder of classification. This is more commonly known as the biological hierarchy (see Table 1). The *species* may also be referred to as a *taxon*. The bottom or last rung is that concept variously known as *variety*, *race*, or *raszenkreis*. Sometimes another unit known as the *subspecies* is inserted before variety.

Nomenclature

The word **species** is the same for singular as well as plural. Each species is designated by two names. The first is capital-

ized, and is the genus name. The second name is usually lower case. I suppose that the second name is the true species designation. In practice, there are usually a number of animals that, if they are all of the same genus, will naturally all have the same first name. Thus, while *Canis familiaris* would be the scientific name of the dog, *Canis vulpes* would be the name of the common fox. It also should be remembered that the law of priority holds. If, as has happened, a species has been named twice, the first name published is always the one that is retained, and any later ones must be eliminated.

History of the Concept

The originator of the species concept is usually considered to have been John Ray, the British naturalist. He, however, seems

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Creationist Classification — An Update

by Wayne Frair, Ph.D.

Note: This article is based on Dr. Frair's presentation in the education track of the 1998 ICC.

Creationists frequently have been criticized for merely being anti-evolutionary without offering viable alternatives, and frequently this is true. But in the past two decades there has been a genuine movement toward establishment of well-founded creationist models based upon empirical research and inductive science. For example, in 1994 and in 1998 the themes for the Pittsburgh International Conference on Creationism has been "Establishing a Creation Model of Origins."

At the 1990 Pittsburgh International Conference on Creationism, Walter J. ReMine introduced "Discontinuity Systematics" (5,1), and Kurt P. Wise "Baraminology" (9). Both of these are creationist-sensitive taxonomic methods which can be employed for classifying all forms of life into their natural groups. Most scientists utilize systematic schemes which assume macroevolution or at least are quite consistent with it; so if it is true that the biosphere consists of groups of unrelated plants and animals, these macroevolution-oriented procedures would be immune from detecting this reality. Both discontinuity systematics and baraminology are systems which presume an origins model

that could be termed "limited-change," "abrupt-appearance," "microevolutionary," or "polyphyletic."

Practitioners of these methods have no compulsion to jump natural gaps among living or fossil forms, and the investigators attempt to ascertain patterns of genetic continuity based upon persuasive evidence. The baraminology and discontinuity systematics disciplines may be expressed visually as an orchard or forest of trees (Figure 1) rather than the macroevolutionary single-tree drawing (Figure 2) for depicting how life might have evolved. The difference between baraminology and discontinuity systematics mainly is that

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to have derived it from an earlier discussion by a Professor Kaspar Bauhin (1550-1624). Finally, Carolus Linnaeus (born Carl von Linne' in Sweden; 1707-1778) succinctly stated in his *Philosophia Botanica*, "*Species tot sunt diversae, quot diversae formae ab initio sunt creatae,*" or "just so many species are to be reckoned as there were forms created at the beginning." This statement became almost law to the world of science in Linnaeus' days. According to this statement of Linnaeus, the category species includes all organisms that resemble each other more than they resemble other organisms. In addition, all in the species are capable of interbreeding. However, after 1766 we no longer find this phrase in his works. In his later years, Linnaeus changed his mind about the place of the species concept in creation. In his last edition, he refers to the genus as follows — *ab initio unam constituerint speciem* — all species of one genus constituted at first one species.

Definitions

Although Linnaeus' words seem concise enough, and the term species is in constant use in the biological world, exact definitions of the concept are usually difficult to find. Certainly this is illustrated by the fact that the AAAS (American Association for the Advancement of Science) once produced quite a large monograph (at least a half inch thick) entitled *The Species Problem* which attempted to solve the riddle.

When we check various sources for the precise definitions of what constitutes a species, we rarely find them. This is because those that are given are frequently extremely variable when compared with each other, as well as being quite tenuous. Actually this situation applies to a greater or lesser degree all the way up the biological hierarchy. Any biology teacher discovers this when he/she attempts to define any of the taxonomic levels in the biological hierarchy. In addition, some will use the term *taxon* (*taxa* - pl.) to designate any one of the levels of the hierarchy. Coming back specifically to the term species, the great Nebraska botanist, C. E. Bessey, recognized the dilemma when he wrote:

Kingdom	Animalia
Phylum(a)	Chordata
Subphylum	Vertebrata
Class	Mammalia
Order	Carnivora
Family	Canidae
Genus (era)	Canis
Species	familiaris
Variety, subspecies, etc.	Miniature Schnauzer

Table 1. **The biological hierarchy.** The right-hand column is a practical illustration showing the biological classification of Dr. Rusch's Miniature Schnauzers.

"Nature produces individuals and nothing more ... Species have no actual existence in nature. They are mental concepts and nothing more ... and have been invented in order that we may refer to great numbers of individuals collectively." [Bessey 1908]

Here is a selection of definitions taken from relatively recent undergraduate college texts:

- 1) "The species is the unit of evolution." [Olson and Robinson 1975]
- 2) "A species is a group of organisms which normally interbreed in nature to produce fertile offspring." [Oram et al. 1976]
- 3) "A species is a distinctive group of organisms, similar in structure and heredity, and able to interbreed." [Weinberg 1974]
- 4) "Species definition; Interbreeding, natural populations that are reproductively isolated from other such groups." [Gardner and Snustad 1981]
- 5) "A species is an interbreeding group of organisms sharing most of their traits in common and reproductively isolated (at least in part) from other such groups." [Stansfield 1977]

Then we have a definition taken from a recent standard dictionary: "2. *Biol.* the major subdivision of a genus or subgenus, regarded as the basic category of biological classification, composed of related individuals that resemble one another, are able to breed among themselves, but are not able to breed with members of another species."¹ Finally, someone once maintained that a species is anything that a competent systematist says it is.

A researcher who believes he/she has found a new *species* of plant or animal will describe what is regarded as the type form. The assignment to a niche in the biological hierarchy is usually checked by a taxonomist. Every organism, when described, must be assigned to each of the categories in the hierarchy; *e.g.*, phylum, class, order, etc.

Variation Among Species

When one looks at various species in the living world, one can be utterly amazed at how some species consist of forms that vary among themselves to such an extent that, if the observer did not know any better, he/she would assign them to different species. For example, let us consider dogs. Recall the many variations found among them with regard to length of hair, whether or not they shed, the shape as well as the length of muzzles, etc. Envision specifically the differences in size and general build between such forms as the terriers and the St. Bernard, between English Bulldogs and Miniature Schnauzers, be-

tween Greyhounds and Collies, etc. Yet no one questions that they are all members of the same species.

However, when we go further and compare the skulls of some dogs with those of other dogs, it appears that the differences go even deeper than the superficial characteristics previously mentioned. For example, study the accompanying illustrations of the skulls of the following dogs. Figure 1-A is that of a Pekingese. Figure 1-B is an illustration of the skull of an ordinary common dog (a mongrel). A comparison of the bones of the skulls reveals that there is quite a considerable variation between those of the Pekingese and those of the ordinary dog. One might also consider Figure 1-C which is the drawing of the skull of a bear. When considering this skull one notes that there seems to be a greater superficial resemblance between the skull bones of the bear and those of the ordinary (mongrel) dog. The Pekingese seems to belong to a different group entirely than either the bear or the mongrel. Yet while both dogs are members of the same species, the bear belongs not only to a different species, but also to a different family as well.

I always have been struck by this quite remarkable situation that pertains among the dogs, as previously mentioned. Although encompassing such extreme variability as demonstrated, the dogs mentioned still are members of the same species, *Canis familiaris*. It also is surprising that we can find an analogous situation; *i.e.*, great degrees of variation within the species, among some members of the same species within the plant kingdom. Certainly we find this to be true within such species as the hawthorns and the oaks. Both groups can become the taxonomist's nightmare.

On the other hand, certain animals seem to be very rigid in their various forms. Consider cats and the almost utter lack of variation in the various forms. There is little variation in general body outline, the position of the ears on the head, and the shape of the muzzle. The variations seem confined to such apparently minor features as color patterns, length of fur, and tail length in the case of the Manx. Similarly, the ginkgo tree would be an example of rigidity of form in the plant kingdom, such lack of variation

extending from the living form into the fossil forms. Not only do we find such species varying only slightly among the current population, but also we find that they do not vary over periods of time from generation to generation either. Among animals, extreme cases of this latter characteristic would appear to be found among the cockroaches, silverfish, horseshoe crab, etc. These particular forms appear to have remained the same from the Pennsylvanian to the present.

Finally, there is also the well-known case of the Coelacanth. Here a species of fish, *Latimeria*, that had been believed to have become extinct about the end of the Mesozoic, was brought up from the depths of the Indian Ocean within the past two decades! There are many of these unchanged persistent forms that are known in Paleontology. In popular discussions they are referred to as *living fossils*.²

Lumpers vs. Splitters

Another complication is the notable difference in philosophy (?) among taxonomists. There are those who are at the one extreme, regarding the slightest difference in color or, even in the case of coccinellid beetles, a variation in the number of black dots on the wing covers which are considered as being a valid reason for putting these forms in separate species. Holders of that philosophy are known as **splitters**. On the other hand there are those who will lump all specimens of forms that seem to have any resemblance at all, into the same species. These are known in the world of taxonomy as **lumpers**. In the case of the coccinellid beetles, most would be "lumped" into a single species.

Classification of Species

Approaching the problem from another direction, biologists consider that there exist several basic types of species. Firstly, there are the morphological species. Secondly, there are the biological species. And finally, there are the genetic species. The morphological species is also called the typological species. Supporters of this thought consider a species as being made up of a group of individual organisms that are basically indistinguishable from some norm or type form. This would have been agreed upon previously by a number of systematists. This is frequently the species

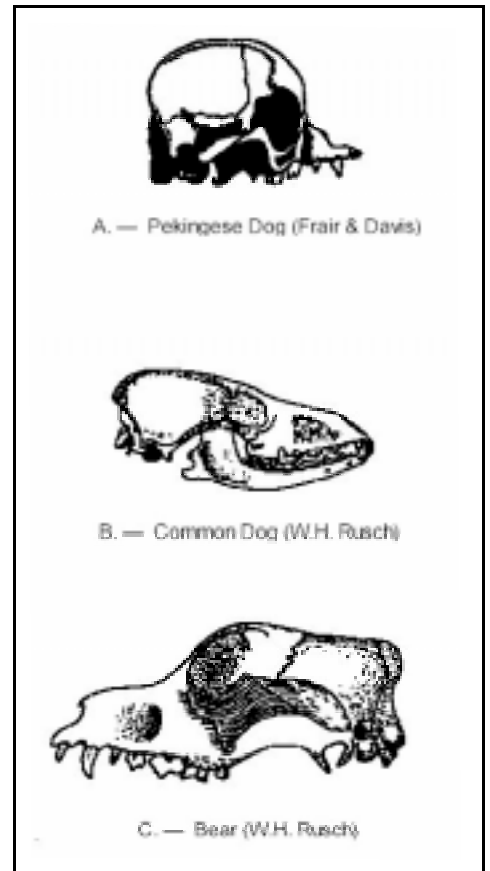


Figure 1.

concept of the paleontologist and requires statistical analysis of any given species population to make a determination. However, in numerous cases, a use of this narrow a definition has led to a listing of a multiplicity of species. Particularly good examples of the chaos this has produced are found in many of the fossil molluscan species.

In the area of paleontology, Mollusca, Brachiopoda, and Bryozoa are described and classified of necessity essentially on shell configuration. Obviously, the question immediately arises, "What are the scientific bases for such classifications?" One ought then ask, "What might be the implications of some past experiments performed on some living Foraminifera?" Such experiments have indicated that both the pH of the environment (Fagerstrom, University of Nebraska) and the oxygen of the atmosphere (Emiliani, University of Miami) have a profound effect on the degree, as well as the direction, of shell rotation in test development.

The Validity of Stratigraphic Determinations

The question might also be asked, "To

what extent are fossils given new species names, solely because they are found in *later* strata, rather than due to any actual morphological difference?" Heilprin writes:

"However divergent be the views of authors on the matter of relationship, it is practically certain that numerous forms of life, exhibiting no distinctive characters of their own, are constituted (sic) into distinct species for no other reason that they occur in formations widely separated from those holding their nearest of kin." [Heilprin 1887]

Douglas Dewar also refers to Heilprin as follows:

"... that the living mollusc genus, *Nautilus* has persisted almost unaltered from the Silurian period until today. Barrande laid great stress upon the sudden appearance, in the full plenitude of their power and side by side, of the distinctive genera of the cephalopods (*Orthoceras*, *Cytoceras*, *Bathmocera*, *Nautilus*) in the Lower Silurian. Then Hyatt came along and decreed 'there are no true species of *Nautilus* in Paleozoic rocks.'³

"In consequence all the species of *Nautilus* found in Paleozoic rocks had their names changed, some are now assigned to the genus *Plectoceras*, others to *Litoceras*, and yet others to *Endolobus*." [Dewar 1957]

The genetic species is a wider concept than the typological. It embraces variable interbreeding populations. The test of whether an organism belongs to a given species is determined by whether it can interbreed with the members of that species. Two organisms are considered to belong to the same species *if* they can produce fertile hybrids with others of that species. Obviously this concept has serious limitations in the area of paleontology, since by its very nature breeding results are unavailable. Mayr refers to this group when he proposes the following definition:

"... that a species is a group of actually or potentially inter-

breeding natural populations which are reproductively isolated from other such groups." [Mayr 1942]

Since taxonomists disagree so widely among themselves about the delineation of a species, creationists should not be contributing to their problem by asserting that God created this or that species. Instead they should strive to find coherent genetic entities that would correspond more closely to the boundaries of the *kinds*. A tremendous amount of work needs to be done on this aspect of the problem. In the light of such a mass of confusion about meanings of the concept *species*, creationists would be well advised to avoid the word entirely when referring to the concept *created kinds*.

Baramin

Frank Marsh once tried to resolve this difficulty by coining a new word, **baramin**. This was composed of two Hebrew words, *bara* meaning 'to create' and *min* meaning 'kind.' Marsh emphasized that this term was in no way to be considered as synonymous with any specific level of the biological hierarchy (see Table 1). He delineated them thus: the widest test for this group in nature would be the power to cross. If hybrids can be formed, then the parents are members of the same baramin, regardless of any differences in appearance. Regrettably, it must be admitted that this term has never seemed to gain acceptance among creationists.⁴

It does happen that the chemical proximity or action of the entrance of the sperm into the egg can trigger some kind of parthenogenetic action. Hence we would further delineate that only a true fusing of sperm and egg into a true zygote would be considered proper *crossing*.⁵ All the foregoing material serves as the basis for my feeling that there is a need for a thorough reevaluation of Cuvier's works. This is true especially in the case of those works dealing with his concepts of types. This study might be especially profitable since it was the existence of **types** that caused Cuvier so consistently to reject the macroevolution proposed by Lamarck and supporters. I particularly have felt that this project might be profitable since Cuvier himself once wrote that whenever he looked at his cabinet of *Aves* specimens,

the type 'bird' stared out at him. Since the term *baramin* is not catching on, creationists might return to the use of the term *type*, whenever we mean *created kind*.

Notes

- ¹ *The Random House Dictionary*, unabridged edition, New York, 1966.
- ² See also *Living fossils — How significant are they?* by Margaret Helder, *Creation Matters*, Volume 3, No. 2 (March/April 1998).
- ³ This quote was taken from the *Proceedings of the Boston Society of Natural History*, XXII, 1883, p. 253.
- ⁴ See the accompanying article in this issue by Dr. Frair for an update on creationist classification, which indicates that the term baramin has gained acceptance in recent years.
- ⁵ For further discussion see Marsh's work *Life, Man, and Time* [Marsh 1967].

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Dr. Rusch, now deceased, was one of the founders of the Creation Research Society, serving the society in various offices, including that of President from 1983-1986. He had earned degrees in Physical Sciences (B.S., Ill. Inst. Of Technology) and Biology (M.S., Univ. Of Mich.), and later studied geology at the Univ. Of Nebraska. He was awarded the LL.D. from Concordia Seminary.

Creationist Classification

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the former includes Biblical revelation as one of its criteria for determining natural groupings. In the latter only comparative data from fossil, living and preserved material are employed.

The term baraminology is derived from the Hebrew *bara*, "create," and from *min*, "kind." In 1941 Dr. Frank L. Marsh introduced the term baramin, and over the decades since that time there have been some efforts aimed at incorporating the concept into empirical studies (see 4,2). But it was not until after 1992 that taxonomic tools began to be used in some depth to characterize the discrete groupings of specific types of organisms (3,6,7,8,10).

Taxonomic specialists in various species should be encouraged to utilize these "limited-change" approaches. With them a

scientist need not feel obligated to jump any gaps unless the evidence is compelling. Even though evolutionary theorizing can be a somewhat enjoyable and challenging "game" that biologists play, the procedures of the "limited change" models emphasize factual data, and when they are compared to macroevolutionary methodology, they appear to be more natural, objective and verifiable.

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Dr. Frair (Emeritus Professor of Biology at The King's College, NY) is a current CRS board member, and was CRS president from 1986-1994.



Figure 1. Abrupt appearance, limited change, microevolutionary, or polyphyletic view of origins. Each grouping represents a baramin or created kind.

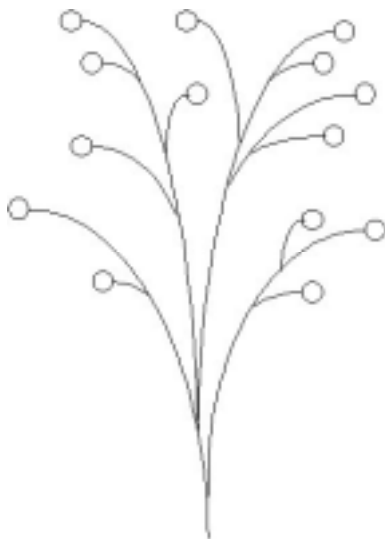


Figure 2. Macroevolution, unlimited change, or monophyletic view of origins. Change is unlimited.

More from Dr. Rusch...

I was once a member of a small graduate seminar in geology. At the time I was in my late forties whereas the rest of the group were young men in their early twenties. One afternoon, I was participating in an impromptu rap session on the subject of Christian beliefs. In the course of the discussion I was greatly disturbed to discover that the whole group were apostate Christians of various mainline denominations. As the discussion progressed, it developed that for each of them, their Christian faith had been eroded over a period of time as their acceptance of the theory of macroevolution grew.

This came as quite a shock to me. Although active in discussions on origins prior to this point in time, this discovery was what launched me upon a much more active avocation of coming to grips with this whole matter of origins. Although having no particular love for the lecture platform prior to that time, it now became a much more active, even necessary, arena for me, particularly to student groups. As a result I participated in numerous religious emphasis weeks at several universities. I also began to use the written word as a weapon in the struggle. ...

... I have embarked on the various propositions in this work for a good reason. I earnestly hope that Christian readers of any age will give most serious consideration to the effect that their accommodations to macroevolution will have on the doctrines of the Church. I hope that I have demonstrated that it surely is a very serious mistake to assume such accommodations as being of little importance or effect.

Rusch, W.H., Sr. 1991. Origins: What Is at Stake? CRS Books, pp. 53-54.

Ghost Craters in the Sky

by Helen "Penny" Fryman

A review of Dr. Danny Faulkner's presentation on this subject at the Origins 98 Conference at Bryan College

Is the man in the moon telling us something? For millennia people have looked up at the moon and seen faces and animal shapes in the light and dark areas. Since the time of Galileo, however, there have been those who have taken a closer and more analytical look at our satellite. Galileo himself noticed that the dark areas seemed smooth, while the light areas were not. And so he named the dark areas "maria" (or "seas"). Today these large, nearly circular dark areas are still called by the old names: Mare Imbrium (Sea of Rains), Mare Serenitatis (Sea of Serenity), Mare Tranquilitatis (Sea of Tranquility), and the like. Although these maria are dry, if there were liquid water on the surface of the moon, it would run down into these areas, for these are lowlands.

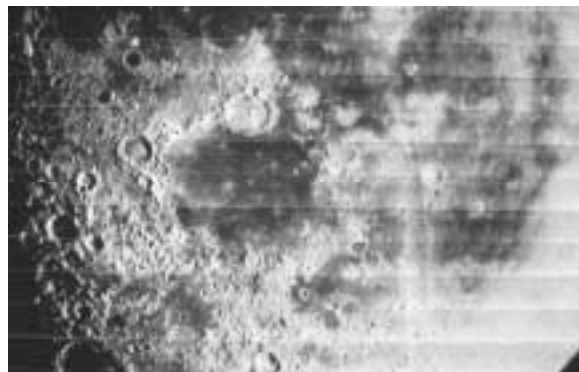
The rest of the moon is pockmarked with craters from innumerable impacts. These are the lunar highlands. Although there are a few recognized volcanically-caused craters, the vast majority of the craters on the moon have been identified as impact craters. The lighter, higher areas of the moon are saturated with these craters to the extent that any new impact will erase all or parts of others. There is no place left on the moon's highlands for any meteorite to hit an unmarked surface. But it is different in the maria. There are not many craters there. Where there are craters, they are sharp, distinct, and isolated — except for some strange formations called "ghost craters." These are half-buried craters which still show the circular outline of parts of the crater rim and perhaps some extrusions like small bits of mountains. Dr. Danny Faulkner, astronomer, thinks there is a story here that has been largely ignored since the Apollo landing.

The highlands of the moon, the light pockmarked areas, are granite. The maria, however, are much denser, darker basalt. Thus the color difference. The highlands have no standard shape, but the maria do. They are basically round, although some overlap. There are no ghost craters in the highlands. They are exclusive to the dark maria. What are those ghost craters? Is there a story there that we are missing?

In the evolutionary scenario, the moon was formed about 4.5 billion years ago. It was molten and gradually cooled, from the outside in, forming a crust that was thin at first, then gradually thickened as the moon cooled. During this time the moon was subjected to the impacts that caused the cratering we see in the lighter colored highlands. Only at that time, the cratering was across the entire surface of the moon, until the entire surface was probably saturated. Then, around 4 to 3.5 billion years ago, according to evolution, there were some major impacts — much larger than those which cratered the rest of the moon. These impacts were so enormous that they allowed magma from the moon's still molten interior to flow up and cover the impact basins, thus resulting in the dark maria. In the evolutionary timescale, the time between the major impacts and the magma overflow is considered to be about a 0.5 billion years. Since then, some other impacts are said to have caused the sharp, clear craters we see in the maria today.

Dr. Faulkner challenges this evolutionary picture on two specific counts. But, first of all, he does **not** challenge the order of events. That the moon was initially pockmarked and *then* subjected to some giant impacts, which cracked the surface enough to allow magma to flow up and cover the crater floors, is not an issue. Nor is it an issue that the sharp craters seen in the maria are the most recent in this chain of events. Dr. Faulkner does take issue, however, with the timing between the large impacts and the magma overflow, and in the presence of the ghost craters themselves. First of all, he asks, how long would it take between the giant impacts and the extrusion of the magma onto the moon's surface? Hours? Days? Maybe, at the outside, a few years? Certainly not 0.5 billion years, though. The time frame here must be collapsed to be real.

Then there are the ghost craters themselves. The large impacts would have wiped out any and all craters they hit. So



NASA photo

the ghost craters could not be remnants of craters from before those impacts. If the impacts that left the ghost craters occurred after the magma overflow had solidified, then they would be as sharp and clear as the other craters in the maria. But they are called ghost craters precisely because they are **not** sharp and clear, but are simply remnants. So they had to have been formed between the time of the giant impacts and the time the magma rose to the surface of the moon and overflowed, partially erasing those craters. This gives us a more interesting scenario regarding the time frame of the moon's history. The large impacts, which caused the maria, and then the smaller impacts which were to become the ghost craters, and then the magma overflow all had to happen within a fairly short timespan. The time from start to finish could have been anywhere from a matter of hours to just a few years. It is hard to imagine it taking longer than that, simply because it is acknowledged by astronomers of all philosophical persuasions that the giant impacts were the direct cause of the magma overflow.

In short, the impact rate must have been huge. The long times demanded by evolutionists are not only not needed here, but are contraindicated by the evidence of the ghost craters and the magma itself. It may be that the man in the moon is, indeed, trying to tell us something.

Penny Fryman is the mother of six children, ages 13-24. She works in the education system at the county level — teaching kids who, for one reason or another, are either falling through the cracks of the system, or who are not in the public classrooms.

Special offer on books by Dr. Wilbert H. Rusch, Sr.

The Argument: Creationism Vs. Evolutionism

1984. Creation Research Society Monograph Series No. 3; 87 pages.

This book is an excellent introduction to the fundamental issues surrounding the creation vs. evolution battle. Written by a former CRS president and college professor, a concise history of the evolutionary concept is provided. The two models, creation and evolution, are compared along with a discussion of the basics of scientific inquiry. The limits to variation possible in nature are explored, and the fossil record is examined to show which model best fits the evidence. This monograph, and its companion volume (Origins: What Is at Stake?), will interest both the layperson and the scientist.

Origins: What Is at Stake?

1991. Creation Research Society Monograph Series No. 5; 73 pages.

The author carefully explains how an acceptance of evolutionism completely destroys one's ability to rely on Scripture. Definitions are given for many of the terms needed to understand the battle for the minds of men in this area. The Scripturally-related concepts discussed are the doctrine of God, the doctrine of the Holy Scriptures, verbal inspiration, concept of miracles, the nature of man, doctrine of original sin, and the Flood. In addition to the Scriptural applications, Rusch also explores such scientific concepts as evidences for the Flood, the species problem, fossils, design, and the origin of life. This is a companion volume to Monograph No. 3, The Argument: Creationism Vs. Evolutionism.

These two books are truly creation classics. Dr. Rusch, now deceased, was one of the founders of the Creation Research Society and a leader in the modern creationist movement. He had earned degrees in Physical Sciences (B.S., Ill. Inst. Of Technology) and Biology (M.S., Univ. Of Mich.), and later studied geology at the Univ. Of Nebraska. He was awarded the LL.D. from Concordia Seminary.

Though they were penned several years ago, the principles and concepts discussed are timeless. These books provide valuable information to help bring the new creationist up to speed. In addition, they serve to remind practicing creationists of the "fundamentals" which define our position.

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USA

Creation Calendar

Note: Items in "Creation Calendar" are for information only; the listing of an event does not necessarily imply endorsement by the Creation Research Society.

February 21

Creation Seminar by Dr. Don DeYoung
St. Paul's Evangelical Lutheran Church
Lockport, IL
Dr. Ron Schoenbeck, (815)838-6762

February 25-27

Origins 99 — Student / Teacher Young-Age Origins Conference
Bryan College
Dayton, TN
(423)775-7599 email origins@bryan.edu

March 12-14

Creation Seminar by Dr. Don DeYoung
Grace Brethren Church
Toppenish, WA
Pastor Greg Stamm, (509)865-4007

March 27

Creation Research Society Public Meeting

5:45pm —

Youth Seminar: "How to Become a Creation Scientist"

Grade School to Creation Research Prof. by D. Kaufmann, Ph.D.

Evolutionist to Creation Scientist by Lane Lester, Ph.D.

7:00pm —

A Biologist Looks at Origins by John Meyer, Ph.D.

Astronomy and Creation by Don DeYoung, Ph.D.

Southern Minn. Assoc. For Creation

Albert Lea, MN

Bryce Gaudian, (507)256-7211 email aerialhelp@vanladder.com

April 23-26

Creation Seminar by Dr. Don DeYoung

Riverside Grace Brethren Church

Johnstown, PA

Pastor Don Rough, (814)288-1163

May 20

Debate: Duane Gish (ICR) vs. Massimo Pigliucci (U. Of Tenn.)

Church of Christ at Mtn. View

Winchester, VA

Evng. Charles Doughty, (540)869-2250 ext. 100

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