LITERATURE REVIEWS

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IS A YAK A BUFFALO?

VARIATION AND FIXITY IN NATURE. Frank L. Marsh. 1976. Mountain View, CA: Pacific Press Publishing Assn. 150 p.

Reviewed by Anthony J. Zuccarelli
Department of Biology, Loma Linda University

Tigers and lions, zebras and horses, foxes and jackals, rats and mice; are they related? Did each pair diverge from a single created prototype or did they begin existence as independent creations? There is now little doubt that divergence (microevolution) has occurred, but how far can it go and what is the origin of the variant genes?

The conservative creationist is under some obligation to account for the variety of characteristics in groups of related organisms found in the world today. The constraints within which he must work are quite demanding. First, all the forms of life he observes must have descended from those that came into existence at the word of God. Second, he accepts the judgment of the Creator that all He made was "very good." (He usually assumes, for instance, that life was under a more benign control than we find today. Population densities were probably controlled by internal regulation of individual growth and reproduction rather than by starvation, predation and disease.) Thirdly, respect for the inspired accounts leads him to believe that the history of life on this planet is measured in a few thousand rather than billions of years.

If he tries to reconstruct the descent of modern organisms from their created prototypes (hereafter called *baramins* at Marsh's suggestion) the creationist is faced with some intriguing questions. Are there limits to the amount of change that has occurred in each line? How far have subgroups derived from one *baramin* diverged from each other? Can they still be recognized as having the same created ancestor? What criteria might be used to assign living organisms to one line or another? These are some of the topics Dr. Marsh addresses in his book.

At its core the book presents a proposal: the suggestion that modern organisms can interbreed only if they are members of the same *baramin*. This opinion is based upon a particular interpretation of the word "kind"

in the King James Version of the Old Testament. If two individuals from different *baramins* were to interbreed and produce an offspring, in Marsh's opinion the new individual would not be of the same "kind" as either of its parents, and such an occurrence would violate the divine command that individuals were to "bring forth after their kind." To accomplish His design, Marsh concludes, the *baramins* were biologically incapable of cross-infertilization and remain so today. Representatives of a single *baramin*, no matter how far they have diverged since creation can, at best, cross-fertilize only with individuals from the same created ancestor. By testing reproductive compatibility at the level of gametic fusion we should be able to sort out modern groups which have descended from a single prototype.

Of course, minor alterations in reproductive chemistry might abolish compatibility between some members of a *baramin*. Consequently, Marsh proposes that negative results cannot be reliably interpreted. The tack is to determine the extent of variation by looking for positive results between organisms. The data so far indicate that some *baramins* include organisms currently placed in different genera and even different families.

If Marsh is correct and gametic fusion can be used to detect the members of a *baramin*, what mechanisms could account for the differences between members? It is easy to imagine how wolves and dogs came from the same ancestor (along with coyotes, jackals, dingos and foxes), but what about less similar types such as turkeys and domestic hens, wheat and rye, pheasants and ducks?

One of Marsh's basic principles is that the degree of divergence of modern organisms from their prototypes is limited. Although nearly all the characteristics of a *baramin* vary in different individuals, the effect of sorting the alternatives in various ways always results in individuals that bear a strong resemblance to one another. Though Marsh is unable to provide us with a creation-centered explanation for variation or to define its limits in molecular terms (he has difficulty distinguishing somatic cell hybridization from DNA hybridization) there is no lack of possibilities. One possible explanation is that most of the viable variants of each gene were created and were present in various individuals of the created population or in some other biological reservoir (viruses, perhaps). Random assortment of the created alleles would result in novel combinations which could account for the appearance of such diverse modern forms as radishes, cabbage, cauliflower and brussel sprouts from a single *baramin*. To this may be added the effects of completely new gene forms generated by mutation, though mutation may actually be a relatively minor source of viable alleles. (Mutation, in its current manifestation, may not have been an intended part of creation since it generates deleterious alleles as

indiscriminately as "neutral" or "good" ones. Available evidence would suggest that mutation is a singularly uncreative process.) The limits of a *baramin*, then, would be largely determined by the number of different alleles for each gene designed at Creation.

The book does have its problems. One of the most persistent is the confusing use of the word "species." The author points out that species designations are largely arbitrary taxonomic groupings. From the creationist point of view the group of organisms descended from the created prototype or population should have the name "species." (That was the intent of the early taxonomists who were, incidentally, creationists.) Since the word has been corrupted by long misuse Marsh proposed the word "*baramin*" thirty-five years ago. Unfortunately the author has not taken himself seriously and throughout the book uses the word "species" when he means "*baramin*," to the reader's confusion. At one point (p 20) he criticizes Darwin for having written, "'I look at the term species as one arbitrarily given,'" because he read "*baramin*" where Darwin wrote "species." The same confusion results when he mentally redefines the phrase "polytypic species" to mean "*baramin*" and applies it retroactively without warning the rest of the taxonomic world (p 31).

The author occasionally trivializes or misstates the evolutionary position. Of course, we would be "flabbergasted" (p 42) if a milk cow should deliver a colt, or if a chicken egg hatched a duck. So would evolutionists! They never postulate such occurrences. We would be equally startled to find a cabbage growing from radish seeds or to deliver a buffalo from a milk cow, yet these are changes which Marsh believes to have occurred. Clearly he does not envision them as happening in a single step. Why does he require such single-step changes of evolutionists?

The book profitably focuses our attention on the important topic of biological variation, its origins and limits. Marsh's proposal, if supported by careful Biblical and laboratory investigation, may answer some of the questions which have perplexed creationists for years.