

## DID MOSES MAKE A SCIENTIFIC MISTAKE?

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An infidel once wrote: “Something that has long perplexed me is the way that inerrancy proponents can so easily find ‘scientific foreknowledge’ in obscurely worded Bible passages but seem completely unable to see scientific error in statements that were rather plainly written.” This skeptic then cited Leviticus 11: 5-6 where the coney and the hare are said to chew the cud, and boasted that since these animals do not have compartmentalized stomachs like those in ruminants (e.g., the cow), Moses clearly made a mistake. What shall we say to this charge?

First, no scientific mistake can be attributed to the Bible unless **all** of the facts are fully known. In such an alleged case, the biblical assertion must be unambiguous. The scientific information must be factual. And an indisputable conflict must prevent **any** harmonization of the two. Do these criteria obtain in this matter? They do not.

First, we must note that the words “coney” (Hebrew *shaphan*) and “hare” (*arnebeth*) are rare and difficult words in the Old Testament. The former is found but four times, and the latter only twice. The etymology of the terms is obscure. In the *Septuagint* (the Greek translation of the Hebrew Old Testament), *shaphan* is rendered by *dasupoda*, meaning “rough foot,” and *arnebeth* becomes *choirogrullion*, literally, “swine-pig.” Hence, identification becomes a factor. It is commonly believed, however, that the *arnebeth* is some species of hare, and that *shaphan* denotes the Syrian hyrax.

But, so it is claimed, neither of these chews the cud. A number of scholars have noted that both of these animals, even when at rest, masticate, much like the cow or sheep, and that Moses thus employed phenomenal language (i.e., describing something as it appears), for the purpose of **ready identification**, inasmuch as these creatures were ceremonially unclean and thus prohibited as use for food (Archer, 1982, p. 126).

That is not an impossible solution; for example, bats are listed along with birds in Leviticus 11, not because both are mammals, but simply because both fly. The Scriptures do not necessarily follow the arbitrary classification systems of man! When Christ said that the mustard seed is “less than all seeds,” (Matthew 13:33), He was speaking from the vantage point of the Palestinian citizen—not that of a modern botanist. We today employ phenomenal jargon when we speak of the Sun “rising and setting.” Technically, it is not correct to refer to a woman’s amniotic fluid as “water,” and yet doctors frequently employ such language. Why can we not allow the biblical writers as much literary license as we ourselves employ? The bias of agnosticism is utterly incredible.

There is, however, another factor that should be taken into consideration. Rumination does not necessarily involve a compartmentalized stomach system. One definition of “ruminant” is simply “to chew again that which has been swallowed” (*Webster’s*). And oddly enough, that is precisely what the hare does. Although the hare does not possess a multi-chambered stomach—which is characteristic of most ruminants—it does chew its food a second time. In fact, we now know that hares pass two types of fecal material.

In addition to normal waste, they pass a second type of pellet known as a caecotroph. The very instant the caecotroph is passed, it is grabbed and chewed again.... As soon as the caecotroph is chewed thoroughly and swallowed, it aggregates in the cardiac region of the stomach where it undergoes a second digestion (Morton, 1978, pp. 179-181).

This complicated process provides the rabbit with 100% more riboflavin, 80% more niacin, 160% more pantothenic acid, and a little in excess of 40% more vitamin B<sub>12</sub> (Harrison, 1980, p. 121). In a study com-

paring cows and rabbits, Jules Carles concluded that rumination should not be defined from an anatomical point of view (e.g., the presence of a four-part stomach); rather, it should be viewed from the standpoint of a mechanism for breeding bacteria to improve food. Cows and rabbits are similar in that both possess a fermentation chamber containing microorganisms that digest what otherwise would be indigestible plant material, thereby converting it into nutrients. Some of the microorganisms in these two animals are the same, or very similar. Carles has stated that, on this basis, "it is difficult to deny that rabbits are ruminants" (as quoted in Brand, 1977, p. 104). Bernard Grzimek, director of the Frankfurt Zoological Gardens in Germany, likewise has classified the hare as a ruminant (1975, pp. 421-422).

On the other hand, the hyrax also is considered by some to be a ruminant, based upon the fact that it has a multiple digestive process.

The hyrax has a very long protrusion, a caecum, and two additional caeca near the colon. At least one of these protrusions participates in decomposition of cellulose. It contributes certain enzymes necessary for breakdown of the cellulose (Morton, 1978, p. 184).

*Grzimek's Animal Life Encyclopedia* (1975) considers the hyrax as a ruminant. Professor Joseph Fischel of the University of California has suggested that the biblical allusion to the coney as a cud-chewer probably was due "to the structure of its digestive system, the protuberances in its large stomach together with its appendix and maw possibly being regarded as analogous to a ruminant's four stomachs" (1971, p. 1144). In his significant study of the intestinal microflora in herbivores, scientist Richard McBee observed that the hyrax has a fermentation chamber for the digestion of grass by microorganisms (as quoted in Brand, 1977, p. 103).

Finally, the precise meaning of *gerah*, rendered "chewing the cud" in most versions, is uncertain. Many orthodox Jews consider it simply to mean a second mastication, or the semblance of chewing. Samuel Clark stated that the meaning of *gerah* "became expanded, and the rodents and pachyderms, which have a habit of grinding with their jaws, were familiarly spoken of as ruminating animals" (1981, 1:546).

In view of the foregoing facts, it is extremely presumptuous to suggest that the Mosaic account contains an error relative to these creatures. A sensible interpretive procedure and/or an acquaintance with accurate information would have eliminated such a rash and unwarranted conclusion.

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