Identification of the Gamal, Shafan, and Arnevet

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The Jewish Publication Society's translation of Leviticus 11:3-7 reads:

Whatsoever parteth the hoof, and is wholly cloven-footed, and cheweth the cud, among the beasts, that ye may eat.

Nevertheless these shall ye not eat of them that only chew the cud, or of them that only part the hoof: the camel (gamal), because he cheweth the cud and parteth not the hoof (ufarsah eynenu mafris), he is unclean unto you.

And the rock-badger (shafan), because he cheweth the cud but parteth not the hoof (ufarsah lo yafris), he is unclean unto you.

And the hare (arnevet), because she cheweth the cud but parteth not the hoof (ufarsah lo hifrisah), she is unclean unto you.

Again we find in Deuteronomy 14:6-7:

Every beast that parteth the hoof, and hath the hoof wholly cloven in two, and cheweth the cud, among the beasts, that ye may eat.

Nevertheless, these ye shall not eat of them that only chew the cud, or of them that only have the hoof cloven: the camel (gamal), and the hare (arnevet), and the rock-badger (shafan), because they chew the cud and part not the hoof (ufarsah lo hifrisu), they are unclean unto you.

Dr. J. H. Hertz adds, after "rock-badger", "Or, 'coney'." So, too, the Soncino translation of *Hulin* 59a gives "rock-badger" for *shafan* and "hare" for *arnevet*. Isaac Levy, translating Rabbi S. R. Hirsch's Pentateuch, takes *shafan* to be the rabbit and *arnevet* to be the hare. Ben Yehuda has hare for *arnevet* and rock-badger, cony, or rabbit for *shafan*. An examination of Jastrow, Grossman, and Efros, *et al* shows a consistent pattern of rabbit, hare, rock-badger, or coney for *shafan* and *arnevet*. From the constant references in dictionaries and encyclopedias to the "coney or cony of the Bible" the impression is obtained that the non-Jewish world also translates the same. A *rosh yeshivah* of Jerusalem told me that Israelis consider the coney, rabbit, or hare to be the *shafan* and/or *arnevet*.

Yet, despite the agreement of all the respected authorities quoted above, and notwithstanding their great knowledge in the field of translation, their translation of shafan as "rabbit", "rock-badger", or "coney" and arnevet as "hare" or "rabbit" is to be challenged. To prove that not one of these animals chews its cud nor has a hoof, much less a "non-parted" or "non-cloven" one, we shall appeal to the very same translators mentioned above. Rabbi S. R. Hirsch writes, "... both of these are not hoofed-animals at all... One usually takes shafan to be the rabbit, and arnevet to be the hare. But this translation can only be right if it were sure that both these animals chew the cud, which hardly seems to be the case." So that excludes the hare and rabbit as correct translations for shafan and arnevet. As for rock-badger and coney, Dr. Hertz writes in his notes, "This animal (rock-badger or coney—see above), and likewise the hare, have the habit of working the jaws as though they were (italics mine) masticating food." That this does

not make the rabbit a cud-chewer we have already shown from the just cited quotation from Rabbi S. R. Hirsch. But a more-encompassing proof is that it is inconceivable that the Torah, which states that if two hairs of a nega turn white the person must rend his clothes, cover himself as a mourner, and leave the society of man (Leviticus 13:3, 45, 46); which says that if the windpipe is cut exactly in half the animal may not be eaten but another measurable hairbreadth makes it kosher (Rashi on Leviticus 11:47); which lists innumerable legal details; would accept as an animal which chews its cud one which merely appears to do so. And once we have established that rock-badger and coney do not really chew their cud, it is no longer necessary to prove that they do not have hoofs (which is correct — they do not), since once they do not chew their cud they are not the shafan and arnevet mentioned in the Bible. We suspect that the reason "rock-badger" was chosen is because shafan is mentioned in Psalms 104:18 and Proverbs 30:6 as living among the sela'iym (rocks). If this reason is correct, it would be funny if it were not such a serious error, for "rock-badger" was originally "brack", an old English word for "badger". 10 So "brock badger" or "rock-badger" is really a redundancy for "badger" and has nothing to do with rocks!

But Rabbi Samson Raphael Hirsch was not the first to question this translation. We find the *Da'at Zekenim MiBa'aley HaTosefot (circa 12th* century c.e.) on Leviticus 11:27 asking why *shafan* and *arnevet* are not prohibited because they "walk on their paws as a bear, dog, or cat" rather than because of not having cloven hoofs or not parting their hoofs. Obviously, the correct, traditional translation of *shafan* and *arnevet* had already been lost eight hundred years ago, and it was then already questioned! What the *Da'at Zekenim* wrote in their few words is what we have been pointing out all along — of course the badger, etc., are prohibited, but not because they have hoofs which are not completely split, but because they walk on their paws, do not have hoofs at all, and do not chew their cud!

It is one thing to show that a translation is incorrect — it is quite another thing to find the correct one. What two animals, besides the camel, bring up and chew the cud, have hoofs which are split but are joined at the bottom (as are the camel's), and thereby signify that they are prohibited?

Dr. Hertz writes: "At the bottom of the camel's hoof there is an elastic pad or cushion on which the camel gets its foothold in the sand. This pad prevents the hoof from being wholly divided." So we began seaching for animals, hoofed to be sure, but with pads at the bottom of their hoofs. We found that pronghorn antelopes, beiras, mountain goats, and chamois have pads on the bottom of their hoofs. Are these animals. then, the shafan and arnevet? No, not at all: Dr. Karl F. Koopman, Associate Curator at the Department of Mammalogy of The American Museum of Natural History wrote that the camel walks on this pad, which is a broad, thick fibrous cushion. The other animals mentioned have a thin, narrow cartilaginous pad which does not bear the weight of the animal, only acting as a shock absorber in connection with the hoof, which bears most of the animal's weight. The hoof is therefore basically similar to those of the cows, sheep, goats, etc. (using nonscientific terms), not to that of the Camelidae. In fact, he wrote that this is not a semantic problem. 12 These pads are not the same.

In order to identify the *shafan* and *arnevet*, we must first clarify the meaning of *mafris parsah*. Rashi writes on Leviticus 11:3 *veshosa'at shesa*— that it is separated above and below...for there is (an animal)

whose hoofs are parted above and are not completely cloven-hoofed and separated, that below they are joined (*Chulin 71*)." Then again on sentence 26 Rashi writes: "*Mafreset parsah veshesa aynenah shosa'at*. For instance, the gamal, whose hoof is parted above but below it is joined." This interpretation leads to several questions:

- 1) A technical question: this definition is not found on either side on page 71, where Rashi says it is, nor on pages 59, 70, or elsewhere where we searched for it. We have no Jerusalem Talmud on *Hulin* nor, in fact, on any of *Kadashim*. From the question which we will soon bring in the name of the *Da'at Zekenim* addressed to Rashi rather than to the Talmud, we see that they believe that it is Rashi's own definition rather than the Talmud's. This is, however, a minor point, since we learned that the sources mentioned in Rashi were later inserted by someone else.
- 2) The Sifsey Hakamim means that you cannot interpret parsah lo yafris as meaning the shafan does not tread with its hoofs on the ground since these animals all have hoofs with which they tread on the ground. Hence, mafreset and yafris must mean "parted" and not "tread". This important point will soon be seriously questioned by contrary evidence. First, however, we must explain why the Sifsey Hakamim goes to such length to explain that the two words, mafreset and parsah, although they have the same root letters, prs or frs, do not have the same meaning — it is because it is unusual for two words having the same root letters in close proximity not to have the same meaning. If it were possible to translate mafreset as "tread" it would be the verb conforming to the noun parsah, which means "hoof", since a hoof is used for treading or walking. This would be the "usual" translation. For example, in the very same sentence, we translate shosa'at as "it separates" and shesa as "a cleft" or "a separation". In Leviticus 19:5 we translate tizbehu zevah as "sacrifice a sacrifice" and in 19:9 we translate Uvekutzrekem et ketziyr as "when you will harvest the harvest of". This difficulty. of translating two words, a noun and a verb, in close proximity, as having two different meanings, will be resolved.
- 3) The Da'at Zekanim asks on sentence 3, if Rashi translates mafris parsah as "hoofs parted above" and shosa'at shesa as "separated above and below", to (sentence 26) exclude gamal which has its hoof split above, but below it is joined, not shosa'at shesa, then the Torah in sentence 4 should have written that the gamal is excluded from the kosher animals because of shesa eynenu shosa'at and not because of not mafris parsah, since it is mafris parsah according to Rashi's definition but it is not shosa'at shesa below!

Another question, which will be answered towards the end, is: why, when describing the gamal in Leviticus the Torah uses the present — eynenu mafris, for the shafan the future — lo yafris, and for the arnevet the feminine past — lo hifriysah? Yet concerning the cud-chewing characteristic common to these three animals the present is used in all three cases. In Deuteronomy 14:7 the present is used for cud-chewing and all three animals are in one sentence, using one verb, in the past, ufarsah lo hifrisu. The most important of these questions is the first — why were three different tenses used in Leviticus? We don't find in any of the laws of the Torah three different tenses, one after the other, about the same law. Why here in Leviticus do we find a change from present to future to past, from one sentence to the next, seemingly without reason? This question will lead us to identify the shafan and arnevet, and even the gamal more accurately.

We cannot answer the *Da'at Zekanim's* question on Rashi using Rashi's words in Leviticus. However, by using the same Rashi's words in the Talmud *Hulin* we will be able to solve this difficulty and also eliminate the difficulty of the *Sifsey Hakamim*. We find in *Hulin* 75b and also in *Yoreh De'ah* 13:2: "If one ritually slaughters an animal and finds within it a living nine-month fetus, if it was *hifris* on the ground it requires ritual slaughter; but if its hoofs are *kelutot*, joined (Rama's gloss: its hoof is all one and not split), then although it was *hifris* on the ground it does not require ritual slaughter, and there are those who hesitate (have another requirement)."

Now Rashi *Hulin* there translated *hifris* as "stood on its hoofs", although almost immediately after, the discussion is about a *kelutah*, an animal whose hoofs are not split. The Author of *Yorch De'ah*, as quoted above, also uses the word *hifris* in the same sense as Rashi does although he, too, is concerned with an animal whose hoofs are not split at all, but are joined as one, as defined by the Rama. We see, therefore, that the root *prs* or *frs* does not necessarily have to mean that the animal's hoof is parted, split, or divided, but it means, according to Rashi, merely standing—using its hoofs, exactly what the *Sifsey Hakamim* says it can't mean here. So we have established that *hifris* means standing on a hoof, whether the hoof is parted or not. *Shosa'at shesa*, of course, means what Rashi says it means—completely separated, but top *and* bottom. (It was strange to translate "the top separated" as *mafris* and "the bottom separated" as *shosa'at shesa*.)

We had previously quoted Dr. Hertz that at the bottom of the camel's hoof there is an elastic pad or cushion on which the camel gets its foot hold in the sand and, as Dr. Koopman said, "The plantar (Rashi's translation of parsah in sentence 3 is plantah b'laz) surface is covered instead by a broad thick fibrous cushion, which is what the animal walks on."13 Of course the camel, shafan and arnevet have hoofs, but they walk on this pad, not on the hoof, and that is the reason why they are prohibited! In their case the Torah is not concerned with whether their hoofs are partially split or completely so — in fact, the Malbim says their hoofs are *mutrasot* and that the naturalists list the camel among those which are mafriysey parsah. 14 (The latter is, of course, not according to Rashi's translation in Hulin.) Yet the Torah says they are not mafris parsah! The answer is that mafris means to stand, tread, or walk on the hoof. So now the question of the Da'at Zekanim disappears—the camel can have its hoof as cloven as possible, but this will not make it kosher one bit — its hoof does not touch the ground. So, too, the Sifsey Hakamim's reason for not translating mafris parsah as "walking on the hoof" because the camel, etc., have hoofs and the Torah says eynenu (not) mafris, can be answered, because the camel does not have a hoof. but it doesn't stand on it! And this is what Rashi meant when he said "joined at the bottom", but not that the hoof is joined there, but something else is there, this pad, to prevent the hoof from touching the ground.

Now we can identify the *shafan* and *arnevet*. If we translate *mafris* parsah as Rashi does in *Hulin*, and which answers the *Da'at Zekanim's* question, we are looking for two animals, besides the gamal, which have pads on the bottom of their hoofs upon which they stand.

We had sent inquiries concerning these animals to many sources, and finally received a photostat from Grace Davall, Assistant Curator of Mammals and Birds at the Bronx Zoo. She wrote, "I had not intended to send a third photo-copy, but may as well do so. It relates to dentition

and is from NEW NATURAL HISTORY by Richard Lydekker." 15 And there, in a part which she had crossed out, we found the answer! Under "Camels and Llamas" the author writes, "The feet form broad expanded cushion-like pads (from which the group derives its title of Tylopoda), of which the under surface is undivided . . . " This, then, is the answer! All members of this group resemble the camel in having these cushionlike pads of which the under-surface is undivided. The word Tylopada in fact literally means: tylo — callus, pad, and poda — foot, hoof. 16 Now all we have to do is find all the members of this group. It includes two kinds of camels and four kinds of llamas. The fact that no other animals are included can be seen from the name of the group and the title of Lydekker's chapter. All other pad-bearing animals were already excluded from Dr. Koopman's letter (see above). Besides that, we find, "Camel Family (Camelidoe), includes Camels and Llamas, and forms by itself the group Tylopoda among even-toed Ungulates (Artiodactyla) ... Camels and their relatives ruminate ... Only two species of Camelus exist — the two-humped Bactrian Camel . . . still found wild in the desert area of Central Asia, and the wholly domesticated Arabian Camel or Dromedary . . . with a single lump of fat, found throughout Africa and S.E. Asia. In South America occur the Llamas... with the two wild species, the larger Guanaco or Juanaco, and the smaller Vicunga; and the domesticated true Llama and Alpaca.17 This information can be found in any encyclopedia.

But now we come to this problem: the Torah lists but three animals in this group — the gamal, shafan and arnevet. How are we to divide these three among these six? But here is the beauty of the whole matter — the Torah clearly, precisely, and very exactly shows us which is which. We had previously asked why the Torah uses the present, eynenu mafris, for gamal, the future, lo yafris, for shafan, and the past, lo hifriysah, for the arnevet. Now all the translators, from the Targumim and Rashi through Rabbi Samson Raphael Hirsch and Dr. Hertz zal, use the present for all these verbs. Rabbi Hirsch explains this by saving, "Whereas of the camel, which having no complete hoof still has the beginning of a hoof, it says: ufarsah eynenu mafris, of the shafan it says: ufarsah lo yafris, and of the arnevet: ufarsah lo hifriysah, both of these are not hoofed-animals at all and this change of expression is certainly in corresponding relation to the formation of their toes."18 The Malbim makes a similar statement — "the arnevet has no hoofs." We have already shown that these animals must have hoofs.

The *Malbim* quotes the Talmud in *Hulin* 42 that "The Holy One blessed be He held every kind (of animal) and showed it to Moses." The *Sifra* on Leviticus 11, (paragraph 61) says that Moses held the animal and showed it to Israel. The *Malbim* states that this is no discrepancy. In Leviticus he related what G-d showed Moses (Chapter 11 begins "G-d spoke to Moses") and in Deuteronomy Moses repeated and showed it to Israel.²⁰

So now everything fits: in Leviticus it is as if G-d is saying to Moses: "Speak to the sons of Israel—the *gamal* which you knew in Egypt and which you know now (Exodus 9:13, 10:26) does not (present tense) stand on its hoof; the *shafan* will not (future) stand on its hoof. Tell them that this animal which I am showing you now they have never seen and do not see now. But in the future will they see that it will, at that time, not stand on its hoof—this is the *shafan*, which is the llama and its cousins, the alpaca, guanaco, and vicuña. The *arnevet*

used to stand on its hoof when you knew of it (past tense). This animal is not found in your present surroundings."

By elimination, since there is only one *Tylopoda* left, the two-humped Bactrian camel is the *arnevet*. For those who demand other proof, Prof. Lionel I. Casson, Professor of Classics and Comparative Literature at New York University Graduate School of Arts and Science wrote, "We are pretty sure that the Egyptians knew both the dromedary and the two-humped camel at that date (Pyramid age), or even earlier, although they certainly did not use either themselves, knowing them only through contact with nearby desert people. Eventually, by Hellenistic times, they came to use the dromedary, but not the Bactrian camel."²¹

Now in Moses' time the Egyptians certainly did have the one-humped camel (Exodus 9:3), so it is safe to say that the two-humped camel was known to the sons of Israel before the time of the giving of the Torah. However, the only time the arnevet is mentioned in all the Bible is in relation to its prohibition,22 quoted twice at the beginning of this article, so they did not have it in the Sinai Desert. The two-humped camel is in any case best adapted to the cold of Central Asia, so again there is a reason for not having it in the hot desert, although they knew about it previously. Hence, the Torah uses the past tense when G-d tells Moses to describe it to the sons of Israel. Now, chewing the cud is not an obvious sign, so all three animals are described as having this property in the present tense - cud-chewing is a description, the hoof's property is a demonstration, told by G-d to Moses that we observed it (arnevet), are observing it (gamal), and will see it eventually (shafanllama). In Deuteronomy, Moses is showing the sons of Israel the animals, so they are all in one sentence, and Moses, so to speak, says to them, "See, these animals never stood on their hoofs." The important point is that in Leviticus the three different animals are described using three different tenses, and this fact enables us to identify the animals. So, every gamal is a camel, but not every camel is a gamal — the two-humped Bactrian is an arnevet!

There are many fascinating facts we can derive from a study of these three animals: they all have similar structures on their hoofs, but the *gamal* uses this pad for a foothold in the hot sand, the two-humped arnevet for a foothold on the cold plains of central Asia, and the llama—shafan for a foothold in the Andes Mountains.

Rabbi S. R. Hirsch writes: "... the chewing of the cud, and the division of the hoof... in themselves cause neither permission not prohibition for eating." In connection with this idea, the following fact may be of interest: "They (camel family) differ from all mammals and resemble the lower vertebrates in possessing oval instead of circular red blood corpuscles." And we know how meticulous the Torah is concerning blood.

Now that we have identified the arnevet as the two-humped camel, the Talmud Megillah 9a, we believe, becomes clear. It is stated there that King Ptolemy gathered seventy-two scholars and ordered them to write the Torah. In place of arnevet they wrote tze'iyrat haraglayim. Rashi explains that this is because the front legs (yodayim), of the arnevet are shorter and smaller than the hind legs (raglayim). Now this explanation is very difficult to understand: the Talmud says the raglayim are small, and raglayim means either all four legs or the hind two; 'adayim are hands or the forelegs. Yet Rashi apparently explains just the opposite! But now that we know that the gamal is the one-humped

dromedary and the *arnevet*, both times mentioned after the *gamal*, is the two-humped "camel", the passage becomes clear. The Bactrian camels have shorter legs than the one-humped camels and therefore are not as tall. They also have harder and shorter feet.²⁵ The Talmud is simply differentiating between the two camels, and the *arnevet* has all four legs shorter and smaller than the *gamal*.

Why is the *arnevet* a "female" animal, having feminine verbs? The *Ibn Ezra* says it is because the male cannot be found. We would suggest that since Hebrew grammar uses the feminine for all paired limbs and organs — hands, feet, eyes, etc., — and since the *arnevet* has a *pair* of humps, perhaps that is why it is "feminine".

After we completed the first draft of this article, Dr. Moses Tendler sent us an article by Rabbi Dr. Joseph Zeliger in which he wrote that the *shafan* is the llama and the *arnevet* is a kind of camel.²⁶

In closing, we must admit that we still have one question concerning the dentition of the shafan and arnevet, but this does change their identification. The correct translation of Leviticus 11:4-6 should be: of them that only chew the cud, or of them that stand on the hoof: the one-humped camel, because he brings up the cud and on the hoof he does not stand... And the llama, for he brings up the cud, but will not stand on the hoof, he is $tam\acute{e}$ to you. And the two-humped camel, because she brings up the cud but did not stand on the hoof...

Now we would like to ask two questions: To those who still think the Wellhausen theory still unburied, and think that the Torah is, G-d forbid, man-made: Tell us, how could Moses or Ezra or your mysterious redactor have known that there is a third Tylopoda, a third animal that does not part the bottom of its hoof, or (according to us) does not stand on its hoof, yet brings up the cud? The llama was absolutely unknown to anyone living in Europe, Asia, or Africa at the time your redactor "doctored up" the Pentateuch over eighteen centuries before America was discovered. How did he know there is such an animal in the New World, when they didn't even know of the existence of the continents of America?

Our second question is addressed to those adherents of other religions who believe the Torah was valid and had to be fulfilled until their respective religious personalities appeared on the scene and then the Torah "lost" its validity. Tell us, for whom did the Torah prohibit eating the llama? The South American Indians did not know the Torah; those who did know the Torah did not come to see the llama until many centuries after you claim the Torah (G-d forbid) became invalid. So for whom was the llama prohibited?

The conclusion is clear: The Torah is eternally valid. And only the One who put the llama on the Andes Mountains is the One Who prohibited it to Moses on Mount Sinai. He knew that some day the llama will become familiar also to the Torah Jew.

FOOTNOTES

- Dr. J. H. Hertz, The Pentateuch and Haftorahs (London: Soncino Press, 1965), p. 449.
- 2. Chulin, ed. Dr. Isidore Epstein (London: Soncino Press, 1935), p. 59a.
- Rabbi Samson Raphael Hirsch, The Pentateuch, trans. Isaac Levy (Lon: don: Isaac Levy, 1958), p. 272.

- Eliezer Ben Yehuda, A Complete Dictionary of Ancient and Modern Hebrew (New York: Thomas Yoseloff, 1960), p. 398.
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- Reuben Grossman (comp.), Compendious Hebrew-English Dictionary (Tel Aviv: The Dvir Publishing Co., 1956).
- 7. Israel Efros, Judah Ibn-Shmuel Kaufman, and Benjamin Silk, English-Hebrew Dictionary (Tel Avic: The Dvir Publishing Co., 1956).
- 8. Hirsch.
- 9. Hertz.
- William Bridges and Mary Baker, Wild Animals of the World (Garden City, New York: Garden City Book, 1948), p. 37.
- 11. Hertz.
- 12. Based on personal correspondence between Dr. Karl F. Koopman, Associate Curator at the Department of Mammalogy of The American Museum of Natural History, and the writer.
- 13. Koopman.
- Rabbi Meyer Leibush Malbim, The Torah and the Commandment (Jerusalem: Pardes, Israel Publishers, Ltd., 1956), p. 793b.
- 15. Based on personal correspondence between Grace Davall, Assistant Curator of Mammals and Birds at the New York Zoological Society, and the writer.
- Webster's Third New International Dictionary of the English Language (Springfield, Mass.: G. & C. Merriam Co., 1967).
- World's Popular Encyclopedia (New York: The World Syndicate Publishing Co., 1937).
- 18. Hirsch.
- 19. Malbim.
- 20. Malbim.
- 21. Based on personal correspondence between Dr. Lionel I. Casson, Professor of Classics and Comparative Literature at New York University, and the writer.
- Shvil, The Book of Words, the New Concordance (Tel Aviv: Sinai, 1959),
 p. 69.
- 23. Hirsch, op. cit., p. 271.
- 24. World's Popular Encyclopedia, loc. cit.
- 25. Ernest P. Walker, revised by John L. Paradiso, Mammals of the World Baltimore: The Johns Hopkins Press, 1968), Vol. II, p. 1374.
- Rabbi Dr. Joseph Zeliger, Kisvey HaRav Dr. Yosef Zeliger (Jerusalem: HaIvri, 1930), p. 235-7.

PROCEEDINGS

Volume III of PROCEEDINGS OF THE AOJS is being planned. Manuscripts are invited reflecting substantive contributions in the following areas:

- a. technology and halakhah applied aspects
- b. modern halakhic questions theoretical analyses
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- e. articulation of the conceptual foundation of Torah Judaism in the light of modern scientific thought.