Introduction

"The *hillazon* is this: its body is like the sea, its creation is like fish, it comes up once in seventy years and with its blood one dyes *tekhelet* - consequently it is expensive".

(Menachot 44a)

Upon reading this braita, there exists a tendency to attempt to tightly match each descriptor to a particular candidate, in our case: the *Murex trunculus*. Though this approach seems reasonable enough, a closer look at the context and intent of the *braita* itself proves that such an analysis is bound to be fruitless – regardless of which creature is put to the test. Yehuda Rock, in his article on the subject of *tekhelet*¹, explains that the vagueness of these descriptions make them ineffective for use in identification. Indeed other more indicative signs could have been given, if that was the intention of the Gemara. Rather, the *braita* must be understood in the context of its conclusion, each point coming to justify the conclusion that "the dye is expensive". R. Herzog, in his doctoral thesis on *tekhelet* and *argaman*,² explains that the declaration "the dye is expensive" is simply out of place in a formal *halachic* definition. It would however, concludes R. Herzog, make sense as part of an explanation to consumers in distant lands, curious as to the basis for the exorbitant price.

When the *braita* is understood in its context, each of the characteristics designedly supports the conclusion. And, as will be demonstrated in the points below, the *Murex trunculus* neatly conforms to each descriptor.

Analysis

"Its body is like the color of the sea"

This statement is fraught with ambiguity if taken as a precise biological description. To begin with, given that the *hillazon* is described elsewhere³ as having an outer body and an inner body, the term "body" leaves one wondering which "body" is being discussed. In the absence of a description of both the inner body and the outer body, it is reasonable to assume that the *braita* is referring to the animal as a whole and as such the "body" referred to is that most readily apparent to the casual observer.⁴

¹ Y. Rock, "Renewal of *Tekhelet* and Issues on *Tzitzit* and *Tekhelet*" (Hebrew), *Techumin*, Vol. 16 (website expanded version: www.tekhelet.com), p.15, n.57.

² R. I. Herzog, "Hebrew Porphyrology", *The Royal Purple and the Biblical Blue*, pp.66-7.

³ Midrash Rabba (Shir HaShirim 4:11). Pesikta D'Rav Kehana, Ch.11. Midrash Tehillim, Mizmor 23.

⁴ Though the references to the *hillazon*'s outer body use the specific term "nartik", the point made here still stands – if the intent of the *braita* was to provide a precise physical portrait, it would be more than remiss not to include a description of the outer shell before proceeding to the inner body.

But even more ambiguous is the phrase "like the color of the sea". The sea is really a myriad of colors – ranging from black to clear and including all the various shades of blues and greens in between. Certainly a more exact definition could have been provided if that was the intention of *Hazal* (e.g., "its color is a beige gray" or "its color is a blue green").

Similarly, objection must be raised against any literal interpretations of the statement: "*Tekhelet* is like the color of the sea, the sea is like the sky, and the sky like the Holy Throne". For again, if an absolute physical definition was the aim of the statement, far less ambiguous objects of comparison could have been chosen. Just as the sea exhibits a vast range of colors, the sky even more so (e.g., depending on the time of day: sunrise, mid-day, sunset, midnight). The purpose of this statement can not be to establish the exact hue and shade, but rather to poetically impart the more philosophical point that the color is to remind us of our Creator in his "Holy Throne".⁵

Thus reading the phrase "like the color of the sea" plainly, leads only to confusion. If however, if the statement is taken in context – in this case the *braita* as a whole, wherein this is yet another point explaining the great expense of the *hillazon* and its product – then its very ambiguity serves its purpose. The statement is telling its readers that the *hillazon* is expensive because it is extremely difficult to find – it being camouflaged by the colors of its environs – whatever they may be. And indeed, the *Murex trunculus* naturally takes on the color of the sea fouling organisms covering the bottom of the sea where it may live – often, but not limited to, blue-green.

"Its creation (briato) is like a fish"

The term "briato" is enigmatic due to its lack of usage in Judaic literature. Some have interpreted it as "reproduction" which is decidedly weak, given the more common terms for reproduction: "piria", "rivia" or "shrizta". Rashi explains it to mean, "form". Though this comment leaves many with the impression that the hillazon is congruous to a fish, from other sources wherein Rashi comments on the hillazon, it is evident that he understood the hillazon to be a creature with a shell.⁹

⁵ R. I. Herzog, "Hebrew Porphyrology", *The Royal Purple and the Biblical Blue*, p.90.

Again, taking the *braita* as an integral whole, it is a more than reasonable assumption that it is referring to the outer body of the animal as it looks when caught – and not after it has been polished and buffed in a laboratory. (Dr. Yisrael Ziderman, "Reinstitution of the *Mizvah* of *Tekhelet* in *Zizit*" (Hebrew), *Tehumin*, 9(1988), p.430).

⁷ Dr. Baruch Sterman, "The Science of *Tekhelet*", *Tekhelet: Renaissance of a Mizyah* (New York: YU Press, 1996), p.69.

⁸ Though a cursory rendering of "sea" might be the water itself, the context of the *braita* implies the general habitat of the *hillazon* wherever it may be in the sea. There is room to interpret the term to mean precisely "sea-bottom" (as in Yishayahu 11:9; Habakuk 2:14), however this is unnecessary given the inexact terminology used throughout the braita.

On Vayikra 11:30 Rashi translates "homet" into Old French "limtza" (limace). In Moed Katan 6b Rashi holds that a shablul, which is also referred to as a limtzon, has a shell. In Shabbat 77b Rashi translates "shablul" as limtza (limace). Thus Rashi uses the French terms limtza and limtzon interchangeably to refer to a **shelled creature**. From these sources which equate the shelled creature "shablul" with limtzon and limtza, it is readily inferred that the homet, which Rashi translates to limtza, is a shelled creature. On the verse in Devarim (8:4): "Your clothing did not wear out", Rashi employs the Midrash: "...as the people grew so their clothing grew with them, like the clothing of the homet which grows with it" (Pesikta d'Rav Kehana, Beshalah). Here again, as inferred above, the homet is a shelled creature; this time the feature is understood from its metaphoric use in the Midrash that this creature has some kind of "clothing" or external cover which grows as its body grows. However, of greater interest here is Rashi's use of the word "homet", for the original Midrash does not use the term homet, but rather "hillazon"! By this replacement, clearly Rashi equates the hillazon with the homet, at least in their both being shelled creatures. For a more complete analysis of these references see my article "Rashi's Hillazon" available at www.tekhelet.com.

Yehuda Rock¹⁰ explains that the term "briat hamayim" is found in the Mishnah (Mikvaot 6:7) where the Aruch explains the term to mean "fish and the like". Thus briah can simply imply a general classification of creatures. Applying this definition renders the phrase "briato domeh ledag" to be "it is a creation like a fish" or similar in general classification to fish. From this we derive that the hillazon is simply "a sea creature". Given our understanding of the context of the braita – justifying expense – it is most logical to interpret the term as such. Living with fish (i.e., in the ocean), as opposed to being land bound, adds to the effort required to obtain the hillazon. This characteristic thus serves, along with the others, to justify the conclusion that its dye is expensive. And as mentioned, the habitat of Murex trunculus is the sea.

"Once in seventy years"

Though some mistakenly understand this point to imply that the *hillazon* is not to be found but once in seventy years. R. Gershon Hanoch Leiner explains that this simply cannot be its meaning since the Gemara (Shabbat 26a) states, "Nevuzaradan left ... the *tzadei hillazon*" - for the sake of the king's garments (Rashi on *ibid*). It would be most unreasonable for Nevuzaradan, after exiling all the Jews from the land of Israel, to specifically leave these Jewish artisans to perform a task needed only "once in seventy years"!¹¹

This expression - "Once in seventy years" - is used often in the Gemara to mean "once in a lifetime". As applied to the *hillazon* it simply means that it washes up once in a lifetime; otherwise, greater effort than simply walking along the shore and picking them up must be made, thus adding to the expense. When understood idiomatically, the point clearly supports the conclusion that the *hillazon* and its dyestuff are expensive. The *Murex* once again, matches this description in that it is does not crawl out onto the shore but remains at the sea bottom, only to be washed up in a very great storm.

"With its blood one dyes tekhelet"

Initially one might be inclined to understand this expression as purely informational – i.e., the blood of the *hillazon* is the source of *tekhelet*. However, given that each of the preceding three expressions comes to justify the conclusion, it is logical to assume that this statement also serves to explain the great expense.

Again, the conclusion reasons, "consequently 'it' is expensive". In current versions of the *braita* the 'it' is in the masculine (*damav*), presumably referring to the expense of the

R. E. Tavger (Kelil Tekhelet, p.315) explains that the term briato as interpreted by Rashi and Rashbam to be 'diokno' or 'form' means that the hillazon has some mannerism like fish – for fish have no particular form to refer to.

¹⁰ Y. Rock, "Renewal of *Tekhelet* and Issues on *Tzitzit* and *Tekhelet*" (Hebrew), *Techumin*, Vol. 16 (website expanded version:www.tekhelet.com), p.15, n.57.

¹¹ See R. Leiner, Sfunei Temunei Hol. R. Herzog (*The Royal Purple and the Biblical Blue*, p. 69) points out that the Gemara in Shabbat may be referring to the *hillazon* of *argaman*. Nevertheless, it is clear to us today that the same snails that produce purple (*argaman*) when developed in the absence of sunlight, also produce blue (*tekhelet*) when produced in direct sunlight (Otto Elsner, "The Past, Present and Future of *Tekhelet*", *The Royal Purple and The Biblical Blue* (Israel: Keter, 1987), p.175).

¹² "The days of our years are 70 years" (Tehillim 90:10). Makkot 7a; Avoda Zarah 11b; Horayiot 10a; Bechorot 8a; Kritot 6b; Meilah 11b. "…the expression is simply an arithmetic hyperbole of the kind which is pretty common in the Talmudim and Midrashim" (R. Herzog, *The Royal Purple and the Biblical Blue*, p. 69).

hillazon itself. In this case, the expression "with its blood one dyes *tekhelet*" explains why the **creature** is so precious, for not only does it require great effort to obtain, but most importantly, it is the source of the deeply desired dyestuff *tekhelet*.

There is however another version of the *braita*, quoted by Rav Shmuel Ben Hofni Gaon in his book on the Laws of *Tzitzit* (Ch. 9)¹³, which has the 'it' in the feminine (*dameha*), presumably referring to the *tekhelet* dye. Taken in context, this statement "with its blood one dyes *tekhelet*" is saying that the quantity of dyestuff afforded by the blood of a single *hillazon* is so minute that this too contributes to the great expense of the **f**nal dye product. Indeed, the volume of dyestuff extracted from the *Murex trunculus* is so small that approximately thirty snails are required to dye four standard *tzitzit* strings.

Conclusion

In conclusion, given the various ambiguities in the phraseology of the *braita*, its purpose cannot be to provide absolute physical characteristics. However, by maintaining that the conclusion – "expense" – provides the intent of the *braita*, a cogent and consistent interpretation of the *braita* emerges, wherein each of the initial points serves to prove the final conclusion. Based on this understanding of the *braita*, each of its individual points match effortlessly with the actuality of the *Murex* snails.

¹³ Quoted in R. E. Tavger, Kelil Tekhelet, Appendix A.