

## The Hillazon Braita

R. Mois Navon, 5772 (5763)

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### 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 – therefore it is expensive.

(Menachot 44a)

At first glance this braita appears to provide a utilitarian description for fisherman to identify the coveted catch that is the source of tekhelet. However, as explained by R. Y. Rock in his article “The Renewal of Tekhelet”<sup>1</sup>, the vagueness of these descriptions actually makes them completely ineffective for identifying the hillazon. Which body? Which sea? Which fish? Seventy years? If practical advice was the intent, clearly more indicative signs could have been supplied.

Rather than looking at the braita as a simple list of features we must reevaluate the statement based on its structure which is composed of a “*reisha*” (protasis) and a “*seifa*” (apodasis) separated by the word “therefore.” The *reisha* contains four conditions which imply the consequence, or *seifa*, that the dye is expensive. As such, the braita is providing descriptors to explain why the dye is expensive. Indeed R. Herzog, in his doctoral thesis entitled “Hebrew Porphyrology”,<sup>2</sup> explains the declaration that the dye is “expensive” is simply out of place in a formal halachic definition. It would, however, make sense as an explanation, indeed, justification, to consumers in distant lands who had to pay a rather exorbitant price for the strands of blue.

When the braita is understood in this context, each of the characteristics designedly supports the conclusion. And, as will be explained in the analysis 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 elsewhere<sup>3</sup> as having an outer body (i.e., shell) 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 – i.e., the

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<sup>1</sup> Y. Rock, “Renewal of *Tekhelet* and Issues on *Tzitzit* and *Tekhelet*” (Hebrew), *Techumin*, Vol. 16 (website expanded version: <http://tekhelet.com/pdf/rak.pdf>), p.14, n.57.

<sup>2</sup> R. I. Herzog, “Hebrew Porphyrology”, *The Royal Purple and the Biblical Blue*, pp.66-7.

<sup>3</sup> Midrash Rabba (Shir HaShirim 4:11). Pesikta D'Rav Kehana, Ch.11. Midrash Tehillim, Mizmor 23. For more on this see my article: “HaPotzo – Extracting the Dye from the *Murex trunculus*” (<http://tekhelet.com/pdf/Potzea3.pdf>),

shell.<sup>4</sup> Furthermore, taking the braita as an integral whole explaining the expense involved in procuring the hillazon, it is more than reasonable to assume that it is referring to the shell as it looks when the creature is to be caught – and not after it has been buffed and polished in a laboratory.<sup>5</sup>

This brings us to the next part of the phrase which describes the body *in situ* as being “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 the intention was a specific color (e.g., “its color is a blue green”).

Reading the phrase – “its body is like the color of the sea” – in its simplest sense leads only to confusion. If, however, the statement is understood within the context of the braita as a whole, wherein this is yet another point explaining the great expense of the hillazon and its dye, then the very ambiguity actually serves the purpose of the braita. That is, this descriptor is telling its readers that the hillazon is expensive because it is extremely difficult to find for it is camouflaged by the colors of its environs – whatever they may be. This description accords well with the Murex trunculus, which naturally takes on the color of the sea fouling organisms covering the bottom of the sea where it lives.<sup>6</sup> R. Y. Rock explains that “sea” often means specifically “sea-bottom” as found in Isaiah (11:9) and Habakuk (2:14).<sup>7</sup>

#### **“Its creation (briato) is like a fish”**

The term “*briato*” is enigmatic due to its lack of usage in Judaic literature. Some have suggested the term to mean “reproduction”; but this is decidedly weak, given the more common terms for reproduction: “*piria*”, “*rivia*” or “*shrizta*”. Rashi translates the term to “*diokno*”, as in, it has the form of a fish. Now, while elsewhere he refers to the hillazon as “a type of small fish” (Shabbat 74b), he also refers to it as a “worm” (Sanhedrin 91a). Given the Gemara’s broad use of the term “fish”,<sup>8</sup> Rashi too intended simply “a sea creature”. R. Tavger notes that fish do not have a unique “form” and thus the intent must be that the hillazon is like a fish in some manner.<sup>9</sup> R. Y. Rock<sup>10</sup> explains that the term “*briat hamayim*” (creations of the water) is found in the Mishnah (Mikvaot 6:7) where the Aruch explains the term to mean “fish and the like”. Thus *briat* can simply imply a general classification of creatures. Applying this definition to our phrase renders

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<sup>4</sup> 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.

<sup>5</sup> Dr. Yisrael Ziderman, “Reinstitution of the *Mizyab* of *Tekhelet* in *Zizit*” (Hebrew), *Tehumin*, 9(1988), p.430.

<sup>6</sup> Dr. Baruch Serman, “The Science of *Tekhelet*”, *Tekhelet: Renaissance of a Mizyab* (New York: YU Press, 1996), p.69.

<sup>7</sup> Y. Rock, p.14. 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.

<sup>8</sup> R. I. Herzog (“Hebrew Porphyrology”, *The Royal Purple and the Biblical Blue*, p.68) explains that “from the sporadic allusion to the nature and characteristics of fishes” in the Gemara no precise taxonomy can be inferred.

<sup>9</sup> R. E. Tavger, *Kelil Tekhelet*, Appendix A.

<sup>10</sup> Y. Rock, “Renewal of *Tekhelet* and Issues on *Tzitzit* and *Tekhelet*” (Hebrew), *Tehumin*, Vol. 16 (website expanded version:www.tekhelet.com), p.15, n.57.

“*briato domeh ledag*” to be “it is a creation like a fish” – i.e., it can be classed in the general category of “fish”.

From this we conclude that the hillazon is simply a sea creature; a conclusion which fits most logically with our understanding of the braita as coming to justify expense. That is, by residing in the sea the effort required, and thus the expense involved, in obtaining the hillazon is far greater than if its habitat was on land. This characteristic, as with the others, serves to strengthen the conclusion that its dye is expensive. And, as is well known, the habitat of *Murex trunculus* is the sea.

### “Once in seventy years”

Though some understand this point to imply that the hillazon is not to be found but once in seventy years, there are two of reasons to reject this interpretation.

One: R. Gershon Hanoch Leiner explains that this simply cannot be its meaning since the Gemara (Shabbat 26a) states, “Nevuzaradan left ... the trappers of the hillazon” for the sake of the king’s garments (Rashi, *ibid.*). It would be 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”!<sup>11</sup>

Two: seventy years is a well worn idiom that refers to the average lifespan of man as the verse states “The days of our years are seventy years” (Psalms 90:10). As such, this expression – “once in seventy years” – is often used in the Gemara to mean “once in a lifetime”.<sup>12</sup> Commenting on these words “once in seventy years”, Rashi (Hullin 81a, s.v. *she’ha’tekhelet*) adds, “from the sea”; that is, once in seventy years the hillazon comes up from the sea. Putting it all together, the phrase can be understood to indicate that the hillazon washes up from the sea on to the shore once in a lifetime. At such a rare, “once in a lifetime”, occurrence, one can simply stroll along the beach and collect the hillazon to make his dye; otherwise, one must make great effort to go out to sea and lay traps<sup>13</sup> for the camouflaged creatures, thus adding to the expense.

The *Murex* once again, matches this description in that it does not crawl out onto the shore but remains at the sea bottom, only to be washed up on rare occasion in a 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

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<sup>11</sup> 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).

<sup>12</sup> 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).

<sup>13</sup> Shabbat 75a. Similarly the ancients of other cultures used the same methods, see: Aristotle, *History of Animals* (5:15); Pliny, *Natural History* (9:37). See my article “HaZad Hillazon - Trapping the *Murex trunculus*”, *Torah U’Madda*, July 2006 (<http://www.tekhelet.com/pdf/Trapping.pdf>).

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, “therefore ‘it’ is expensive”. In current versions of the braitā the ‘it’ is in the masculine (*dama*), presumably referring to the expense of the 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 that is tekhelet.

There is however another version of the braitā, quoted by Rav Shmuel Ben Hofni Gaon in his book on the Laws of Tzitzit (Ch. 9)<sup>14</sup>, 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 final dye product. Indeed, the volume of dyestuff extracted from the Murex trunculus is so small that approximately thirty snails are required to dye four strands of tzitzit.

## Conclusion

In conclusion, given the various ambiguities in the phraseology of the braitā its purpose cannot be to provide definitive physical characteristics. However, by resolving the braitā into constituent parts (i.e., *reisha* and *seifa*) a cogent and comprehensive interpretation of the braitā emerges, wherein each of the initial points serves to prove the final conclusion: expense. Furthermore, in so doing, we noted that each of the braitā’s points match effortlessly with the hillazon that is the Murex trunculus.

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<sup>14</sup> Quoted in R. E. Tavger, *Kelil Tekhelet*, Appendix A.