Delving into Recent Concerns about Worms in Fish

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A new understanding of the habits of a worm that infects many kosher fish has brought the kashrus of some of our most commonly consumed fish into question. While the Shulchan Aruch speaks clearly of worms that are found in the flesh of fish and says they are kosher, a question surrounding this particular worm and its origin has raised concerns about consuming certain kinds of fish.

The Anisakis Worm

The recent shailah is centered around the Anisakis worm, a worm that enters the body of many fish that live in the wild, including salmon, cod and certain flounder. Anisakis lay eggs inside large marine mammals such as a whales, seals or dolphins, and when the mammal excretes the eggs, they sink to the bottom of the ocean floor. The eggs subsequently hatch, and the Anisakis worm emerges. The worm is eaten by crustaceans, such as shrimp (which is a dag tamei). The shrimp is then eaten by larger fish, such as salmon, cod, etc., which are eaten by the large marine mammals in which the Anisakis lays its eggs; there the life cycle of the Anaskis begins again. All through its life cycle, the Anisakis continues to grow and only reaches its full size inside the large marine mammal.

The problem upon which the recent halachic discussion is based is that when the salmon, cod, or flounder containing the Anisakis, which by now has grown into a full-fledged worm, is caught prior to its being consumed by the marine mammal, the kosher fish now has a bona fide worm inside of it. Oftentimes the worm is found in the viscera (stomach) of the fish, which is discarded and is not relevant to the halachic question. But what happens if the worm is found in the flesh of the fish? Is this a problem?

The Shulchan Aruch (84:16), based on the Gemara in Chulin (67b), that worms found in the flesh of fish are not deemed to be a problem, while those found in the fish's stomach are considered to be shratzim. The reason given by the Gemara as explained by the Poskim is that worms in the flesh grew from the flesh and therefore don't have the halachic status of a sheretz, as they were never shoretz al hamayim. However, worms found in the stomach, the Shulchan Aruch tells us, hatched outside the stomach and then made their way into the stomach, giving them the status of sheretzim. If this is the case, what is the shailah if all we eat is the flesh of the fish?

The Sable Shailah of 1978

A similar shailah arose in 1978 concerning sable. The shailah was posed to the gedolim in the following way: Scientists tell us there is no such thing as worms that grow on their own in the flesh of a fish and that they must come from outside of the fish. If this is the case, these worms should they have the status of shoretz al hamayim and be problematic. The Belzer Dayan, Rav Shlomo Gross, shlit"a, writes in his sefer Mishna Shlomo (siman 31) that he posed the shailah to Harav Moshe Feinstein, zt"l, who poskened that it is not a problem. Rav Gross explains in his teshuvah that he presented the shailah

saying that since scientists say that all worms come from the water, we are not responsible to reconcile science with halachah.

Others wanted to take a different approach with this shailah, which has arisen many times over the years, trying to reconcile halachah with science. Rav Pesach Eliyahu Falk writes a sevarah in a teshuvah from seventeen or eighteen years ago that when a sheretz is microscopic and not nireh l'ainayim, it is not halachically considered to be a sheretz and can be consumed. With this in mind, it was suggested that we can say that the worm does in fact come from an egg out in the open, but when the worm is eaten by the shrimp, it is not nireh l'ainayim, only becoming visible while in the shrimp; this gives it the halachic status of not being shoretz al hamayim.

One of the world's foremost experts on tolaim, Rav Moshe Vaye, writes in his sefer Bedikas Hamazon K'Halacha that he presented this sevarah to the gedolim in Eretz Yisroel at the time, and it was accepted by many of them as sufficient to answer the claim of science. Among the gedolim who accepted this sevarah were Harav Shlomo Zalman Auerbach, Harav Yisroel Yaakov Fisher, Rav Benzion Abba Shaul, the Minchas Yitzchok and yebadel l'chaim, Harav Nissim Karelitz. Rav Yosef Shlomo Elyashiv did not agree with the sevarah but still poskened that the fish are mutar to eat.

What May Have Changed

Where the Anisakis worm differs from other worms is that those involved in the shailah have seen signs of the worm going from the viscera into the flesh of the fish, especially after the fish has died. This creates a whole new shailah, one that was never dealt with in the past. Whereas in the past, the heter was based on merely answering the claim of science, we are now faced with answering what we see with our own two eyes - namely a worm that was at one point completely in the viscera, rendering it a full-fledged sheretz living in the flesh of the fish. Besides the studies of the scientists that have observed the entire life cycle of the Anisakis, there is much evidence that the Anisakis is swallowed by the host fish and then penetrates the flesh from the viscera. There are several proofs of this reality:

- 1) It is found predominantly in the organs of the stomach and less frequently in the flesh, and in some of the fish, only in the stomach.
- 2) In many fish the worms are found only in the section of the flesh that is close to the stomach (belly flaps) and in other parts of the flesh, they are not found (i.e. near the tail).
- 3) They have been found while penetrating the flesh, with the Anisakis partially in the viscera and partially in the flesh, indicating that they are on the way to the flesh from the stomach.

This shailah, with the new facts that have been revealed, arose in Eretz Yisroel close to one year ago, and the Gedolei Haposkim, including Harav Y.S. Elyashiv, Harav Nissim Karelitz and Harav Shmuel Wosner all stated that it is a problem to consume fish that have the Anisakis worm in their flesh.

What happened to the reasoning that the worm is microscopic? While this was sufficient when we were attempting to reconcile halachah with science, the poskim say it is insufficient to permit something that was seen with our very own eyes, as this heter isn't found in any sefer throughout the generations. On top of that, clinical research done by some of today's leading experts on the Anisakis worm states that the smallest an Anisakis worm can be when it enters the fish is between .23 and .3 mm. In a

chaburah given on 3 Nissan in BMG, Rav Kalman Schwartz said that the Taz and the Shach speak about a worm called a milvan, which is found in rice and is considered to be nireh l'ainayim. This milvan is known to be only .2 mm, which would mean that the Anisakis are in fact considered nireh l'ainayim, even when they enter the flesh of the fish.

The Tzad to Be Matir Even Today

Although the shailah seems to be a concern today more than ever before, there are poskim, including Rav Yisroel Belsky, who say there are no new concerns in the shailah. A letter obtained from the OU states the position of Rav Belsky and others who are matir as follows: "They feel strongly that the parasites currently affecting various species of freshwater and saltwater fish are not appreciably different from those that existed in the time of Chazal, and the parasites found in the flesh of fish are still permitted. Rav Belsky understands that Chazal told us that the tolayim found in the flesh are mutar because of the severah of "minah gavli" (see Rashi's understanding of the Gemara Chulin 67B, where the term is explained to mean that the parasite grows in the fish and becomes permitted as part of the fish regardless of its original size when entering the fish or migrating from the viscera [this is the way the matirim understand Rashi, the osrim disagree]), and that we are not commanded to become experts in the field of parasitology in order to know how a parasite got into the flesh in order to know which types are permitted. The rabbonim permitting the parasites also point out that Chazal did not differentiate between the permitted types of parasite in the flesh from the forbidden types, which might also lead one to believe there is no halachic distinction in how one found the parasite in the flesh."

Another reason to be matir according to some is based on a checking process done by certain fish companies right after the fish are caught, which may make the sheratzim into a miut sheaino matzui and would therefore not require checking. This method is used in certain kinds of flounder.

Explaining the Psak of Previous Poskim According to the Osrim

How can we say that eating these fish is assur? Doesn't this imply that the gedolim of previous generations were nichshal in this matter?

The answer in the case of the Anisakis may be quite simple. It is reported that the Anisakis population continues to grow due to a number of factors, including wildlife endangerment acts that have increased the world population of large marine mammals. A study done off the coast of France in 1960 found that in 9,000 fish that were checked, 1.5% were found to be infected with the Anisakis. The same exact test was done twelve years later in 1972, and it was found that a whopping 60% of the 9,000 fish were infected with the Anisakis!

In addition, some want to explain that the growing problem of the Anaskis is due to today's mass shipping of fish. While in the days of old fish were caught at the river, brought home, cleaned out and cooked, today it is common for fish to be caught out at sea and shipped to the consumer. Shipping methods vary, but fish are often shipped whole with the stomach intact. This allows time for the Anisakis worm to migrate from the viscera into the flesh, which scientists say often occurs after the fish is dead.

A method that can be employed to prevent the Anisakis from migrating into the flesh is freezing the fish upon capture. The Anisakis die when frozen, thereby preventing any migration. This explains why the Merluza Hake fish processed in Argentina has worms only in the gut area of the fish, yet the same fish processed in China has many worms in the flesh as well. The fish processed in Argentina are chilled immediately after capture, thereby keeping the worms in the viscera in their sleepy mode (encapsulated), while in China, the fish are partially gutted after being captured and are not kept in a cold state. As the fish warms, the worms migrate to the flesh.

Recently, an experiment was done in Norway with thousands of herring fish kept cold at -2o Celsius (keeping the worms in their sleepy state). These thousands of fish were checked, and no worms were found in the flesh. Ten fish were left out and allowed to warm for a day after their capture. Nine out of ten were found with worms migrating into the flesh. Many of the fish that reach the consumer today are shipped under conditions that allow the Anisakis to migrate into the flesh.

Returning to the Psak of the Shulchan Aruch According to the Osrim

The fact that the Anisakis can be assur if found in the flesh of the fish is in no way contradictory to the halachah as stated in Shulchan Aruch. We can simply say that those worms that are found exclusively in the flesh and that grow in the flesh are the ones permitted by Chazal. However, the Anisakis worm, which is initially found in the stomach and sometimes penetrates into the flesh, is forbidden. This approach doesn't take the view of science into account.

Even according to those who want to take science into account in understanding the Shulchan Aruch there is a possible solution to this heter. Rabbi Gershon Bess, noted posek in Los Angeles, has said that perhaps we can say the case of the Shulchan Aruch is referring to the parasitic worm Heterophyes, commonly found in Egypt and the Middle East, which enters the body of the fish through the skin. This worm enters the body when it is approximately .1 mm, which may be considered aino nireh l'ainayim. If this is the case, it can be suggested that perhaps this is one of types of worms that Chazal permitted. We are given a hint to this by the poskim who say that "the worm is found between the skin and the flesh or in the flesh." This clearly indicates that the worm enters from the outside, via the skin of the fish, and that it doesn't grow inside the flesh.

The Views of the Kashrus Agencies

In light of the concerns explained above, the KCL has adapted a stringent view on the matter. According to Rabbi Avrohom Moshe Wiesner of the KCL, KCL establishments are l'chatchilah avoiding serving the infected fish unless they are checked by a mashgiach. The Market Fish Shop and the Fishing Line (NPGS Jackson) are both under KCL supervision and are not selling the fish that may be problematic.

A phone call to the OU Kashrus Department confirmed their agency's stance that there is no problem with these fish and no checking is necessary. (A full report of their stance can be seen on jerusalemkoshernews.com.) Interestingly, it has always been the policy of A&B Fish to check all their white fish prior to grinding it for gefilte fish.

Something Fishy II: Addendum to Article on the Current Fish Controversy

Posted by lakewood246 in <u>Local News</u>, <u>National News</u>, <u>The Voice Of Lakewood</u>, <u>World News</u> on Apr 26th, 2010 | <u>no responses</u>

Since the publication of our article entitled <u>"Something Fishy: Delving into Recent Concerns about Worms in Fish"</u> additional information has come to our attention regarding the halachic dispute over the Anisakis worm found in fish and the kashrus status of these infected fish.

We present this additional information here.

The Heter of Aino Nireh L'Ainayim

The reasoning for allowing consumption of these worms based on the svarah that they enter the fish when they are microscopic is the subject of great debate amongst the poskim.

Many poskim are content with allowing the consumption of the infected fish if the Anisakis is in fact microscopic, while others are hesitant to use the svarah.

While some brought proof that the Anisakis is not microscopic based on the discussion in the Taz and Shach about the Milvan worm, which is shorter in length than the Anisakis worm yet is considered nirah l'ainayim by the poskim, others differentiate between the two worms.

They reason that the Milvan is in fact shorter but significantly wider than the Anisakis.

The Anisakis is actually longer than the Milvan but is extremely narrow, between 15-20 microns, the width of a thread, which may render it aino nireh l'ainayim.

Another factor that may render the Anisakis aino nireh l'ainayim is the fact that it is translucent.

Of interest is that this heter, purported to have been introduced close to twenty years ago for the first time, is suggested by the Sefer Minchas Ani, an accepted halachic sefer written roughly 200 years ago and quoted by the Nodah B'Yehuda.

The Rise in the Anisakis Population

Many have pointed to the rise in the world's Anisakis population as proof that there is a new halachic issue that needs to be considered.

Studies done in the 1960s and 1970s show a dramatic increase in the Anisakis population.

This increase can be attributed to the Marine Mammal Protection Act, passed in the United States in 1972, which legislated protection of endangered marine mammals such as dolphins, whales and seals.

It is from within these mammals that the eggs of the Anisakis are hatched. With the protection of these animals from hunters, the world's population of marine mammals has grown, causing a rise in the Anisakis worm's population.

However, if one would go back 100 years, prior to the endangerment of the marine mammals, the world's Anisakis population would in all likelihood be in line with what we see today; indeed, today, these mammals are still endangered species, although their population has grown, while 100 years ago they were not yet endangered, yet the poskim then permitted the consumption of infected fish.

Discrepancies in Location, Season, Sea Levels

One final factor that is crucial in determining the infestation levels, and hence the kashrus of the fish, is where and when the fish are caught.

Fish that are caught close to the bottom of the ocean are more likely to be infected due to the fact that the eggs are hatched on the ocean's floor.

Fish that are caught closer to the top of the ocean are less likely to have high levels of infestation.

Dagim Fish is careful l'chatchilah to catch fish from higher levels in the sea, which can make the level of infestation a miut sheaino matzui, precluding any problems with consumption.

In addition, Dagim guts and freezes their fish while at sea and checks and candles the fish, preventing the problems that may arise from fish worms even according to the osrim.