

Worms in Fish – The Recent Controversy

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Prior to the commencement of this discussion, it is imperative to mention that it is not our intent to take any sides on this issue, but rather to give an overview of the shailah and discuss the various opinions and scientific facts on the subject. It is the obligation of each reader to follow the opinion of their rov.

THE PROHIBITION OF *SHERATZIM*

In a previous issue we discussed that there are three categories of insects. 1. *Sheretz ha'arets - terrestrial insects.* 2. *Sheretz hamayim - aquatic insects.* 3. *Sheretz ha'of - flying insects.* In this issue we will be discussing *Sheretz hamayim - aquatic insects.* Four *issurim* are transgressed for each of these insects consumed.¹

INSECT DEVELOPMENT

Two of the terminologies used by the Torah in describing insects are *shekatzim* and *remasim*. The *Rambam* maintains that the term *shekatzim* refers to insects that multiply from eggs deposited by female insects. The term *remasim* refers to insects that reproduce spontaneously (i.e., on their own) from manure or rotting carcasses.²

The concept of spontaneous reproduction concerning insects is alluded to by *Chazal* as well. *Chazal* in *Maseches Shabbos* state that one who kills lice on *Shabbos* is *potur*, since lice are not *poru verobu*. They don't multiply from a parent lice.

¹ ע"י רש"י במס' מכות דף טז: שמבאר את הפסוקים שמהם לומדים הלאו. וע"י חינוך מצוה רע"ד שגם דגים טמאים בכלל, אכן ע"י רמב"ם פ"ב הי"ב.
² ע"י רמב"ם הל' מאכ"א פ"ב הל' י"ג, וע"י תוספות יו"ט ותפארת ישראל במס' מכות פ"ג מ"ב.

Instead, as *Rashi* explains, they sprout from human flesh.³

These statements have caused a bit of confusion in light of contemporary scientific belief. Much research has been done in this area, and after numerous experiments, scientists claim to have negated the theory of spontaneous reproduction. For example, it had been believed that maggots reproduce spontaneously from decaying material. After much research, it was discovered that flies actually deposit microscopic eggs in decaying materials. The living or rotting material furnishes heat for the hatching of the eggs and food for the newly hatched maggots. Thus, it may seem as if they spontaneously emerged from the decayed material.

Furthermore, a common insect found in vegetables are aphids. They, too, seem to spontaneously emerge from the vegetables. In truth, however, in autumn, the females lay fertilized eggs that survive the winter in crevices and hatch in the spring. These eggs produce wingless females that reproduce without fertilization from males. After several generations, winged females are produced. They then migrate to other plants and continue reproduction of wingless females. Toward the end of summer, winged males are produced and fertilize the winter eggs.⁴

The question which must be addressed is how to accept the contemporary scientific theory in light of *Chazal's* statements.

THE INITIAL STAGE OF THE *ISSUR*

In a previous issue we explained that the Torah only prohibits terrestrial insects that have crept on the ground. Insects that developed inside a *detached* plant or any other food item and never crept out from inside the food are permitted according to the Torah. If the insect emerged at all from the plant or food, it is

³ ע"י מס' שבת דף קז: שההורג כינה בשבת פטור דאינה פריה ורביה, וע"י רש"י שם דף יב. ד"ה וכן שמבשר אדם היא שורצת.
⁴ מדרישה אצל מומחים.

forbidden to eat the insect even if it crawled back inside. In *halacha*, this is called 'piresh.'⁵

However, insects that developed in a plant while still attached to the ground are considered by the Torah as having crept on the ground and are forbidden even before they emerge. (In order for it to be forbidden, the insect itself must develop while the plant is attached to the ground. It is inconsequential when the egg was laid.)⁶

The same applies to aquatic insects, as will be discussed below.

WORMS IN FISH

Worms can be found in fish either in the stomach, in the flesh, between the flesh and the skin, or they can cling to the outside of the flesh. The worms that cling to the outside of the flesh are forbidden to be consumed. Such infestation is commonly found in carp. Placing the fish in vinegar or a salt solution is helpful to remove these worms. Preferably, these fish should be cleaned by trained fishermen, as proper cleaning is arduous and requires skill.⁷

Additionally, *Chazal* differentiate between the worms found either inside the flesh or between the flesh and the skin, and the worms found inside the stomach of the fish.⁸

Worms found inside the stomach are forbidden *misafak*. Worms found in the stomach may have either spontaneously been produced inside the stomach or these worms may have developed outside the fish and then entered the fish. Therefore, these worms may have the status of *sheretz hamayim*, and are forbidden *misafak*.⁹ Care must be taken when filleting the fish to cut out the stomach while it is whole, so that the worms don't crawl out and get mixed with the fish. A number of local fish store workers have been seen chopping up fish without paying much attention to the fact that the stomach splatters open and the worms come into contact with the fish, cutting boards and knives. This commonly occurs when they recklessly process white fish at a rapid pace. Consumers should be wary of this and should only patronize fish stores

where the workers are interested in proficiency rather than productivity.¹⁰

Chazal in the *Gemara* clearly state that worms found in the flesh of fish - which we eat - or between the flesh and the outside skin of the fish are permitted. *Chazal* state that these worms definitely developed inside the fish and are therefore permitted. These worms are not considered to be *sheretz hamayim*, since they developed inside the fish, and as long as they are still inside the flesh, they are permitted to be eaten and one is not required to chop up the fish to search for these worms and remove them.

This *Gemara* is quoted in the *Shulchan Aruch*, and the *Shulchan Aruch* unequivocally permits such worms without making any exceptions.¹¹

THE TUMULT

Approximately thirty years ago, some people started a commotion, questioning the long accepted custom to eat fish containing worms in its flesh. The uproar revolved around the modern scientific belief that every single worm that is found inside the flesh originated, at some point, from outside the fish; as they reject the theory of spontaneous reproduction.

The two worms popularly discovered in various fish are the Anisakis, also known as the Herring Worm, and the Pseudoterranova, also known as the Cod Worm.

Scientists have claimed that these worms undergo a lifecycle. It begins with adult worms that live in the stomach of marine mammals such as seals, dolphins or whales. Their eggs pass into the sea, and when they hatch, the larvae are eaten by other insects such as copepods which are then eaten by crustaceans (i.e. a classification that includes copepods, krill, and shrimp). These crustaceans are then eaten by large fish, and the worms are released into the stomach of the large fish (e.g., salmon, cod, and herring). The worms then supposedly pierce through the stomach wall and enter the flesh of the fish. These fish - if not caught first - are then eaten by a marine mammal, which completes the life cycle and begins a new one.¹²

The question that needed to be addressed was how to understand *Chazal's* statement that the worms develop inside the flesh of the fish and are therefore permitted, when contemporary scientific belief is that

⁵ ע"י מס' חולין דף סז. וע"י שו"ע יו"ד סי' פ"ד סעי' ד'.

⁶ ע"י שו"ע שם סעי' ו', ושם עתי מהגר"י בעלסקי שליט"א שתלוי בזמן גידל התולעת ולא בהנחת הביצה.

⁷ ע"י חכמ"א כלל לה סי' כח, וע"י חזו"א יו"ד סי' יד' אות ו' ה' וי'. וע"י בסוף מדריך לבדיקת תולעים מהגר"פ פאלק שליט"א.

⁸ ע"י מס' חולין סז, וע"י שו"ע סי' פד סעי' טז.

⁹ ע"י ב"י שם בענין דגים הנמצאים במעיים "דאיכא למימר" בהו דתו מעלמא, והוא מהגהות אשירי (שם הג"ה ב') ע"ש, וכן איתא מפורש בפמ"ג שם סקמ"ג.

¹⁰ מדרישה אצל מומחים.

¹¹ ע"י שו"ע סי' פד סעי' טז.

¹² כן איתא בספרי מדע.

all the worms we find in the flesh originate from outside the fish.

At the time, the question was asked to virtually all *gedolei Yisroel*. Almost all were *matir*. The Hisachdus Harabbonim held a meeting and they were *matir*.¹³ The Debriciner Rov¹⁴, the Pupa Rov, the Klausenberger Rov and many other *chasidisha Rabbonim*, were *matir* as well.¹⁵

The *shailah* was presented to Rav Moshe Feinstein *zt"l*, Rav Shlomo Zalman Auerbach *zt"l*, the Minchas Yitzchok, Rav Yisroel Yaakov Fisher *zt"l*, and *ybl"c* Rav Yosef Shalom Elyashiv and Rav Nissim Karelitz. They were all *matir*.¹⁶

Rav Shmuel Vosner, the author of the *Shevet Halvevi*, at that time, took a stricter approach and was *choshesh l'issur*.¹⁷

Close to fifteen years ago, the *shailah* was once again raised concerning whitefish. At that time, they presented the *shaila* to the Gedolei Eretz Yisroel, that these worms are only found in the flesh of wild fish which swim in the open water and thus can be a part of a lifecycle, while farmed fish do not contain such worms. Almost all *rabbonim* were nonetheless *matir*, with the exception of Rav Vosner, who still maintained that is preferable to be stringent and refrain from eating these fish. Rav Elyashiv at that time was also a bit more skeptical, due to the distinction discovered regarding farmed fish, but he did not issue a definitive ruling.¹⁸

In truth, the above distinction was already presented to Rav Moshe *zt"l* fifteen years earlier by the *belzer dayan*, and he was not fazed by that observation, as will be pointed out later on in the article.

WHAT CHANGED RECENTLY

Recently, some individuals decided to examine fish themselves and took notice of an abundance of worms in the stomach of the fish and found the same looking worms inside the flesh of the fish. They wondered whether perhaps the reason why the *rabbonim* who were previously *matir* these worms did so because they said that we do not believe the scientists when their word contradicts *Chazal*. Now, however, it is not just a matter of whether we believe the scientists that the worms found inside the flesh originate from the stomach and from outside of the fish. We, ourselves, have an indication of this well.

Additionally, in the fish that were checked, it was discovered that the worms in the flesh were in the area of the belly flaps, indicating to the examiners that the fish migrated to the flesh from the stomach. Some worms were even seen protruding slightly into the inner cavity from the flesh.

Based on these indications, some individuals approached Rav Vosner, who ruled that these worms must not be those that *Chazal* discuss, and although, until now, it was just a matter of whether or not to believe the scientists, now that we have our own indications that they may migrate from the stomach to the flesh, one must definitely be stringent.¹⁹

The *shailah* was then brought to Rav Elyashiv, who, relying on Rav Vosner's *bais din*'s examination of these indications, ruled that if there are indeed such indications, one must be stringent in regard to these worms.²⁰

In order to reconcile the statements of *Chazal* with these findings, they claimed that all the worms that *Chazal* discuss were of a different extinct species which developed inside the flesh. These worms, they said, no longer exist nowadays, and the Anisakis, Cod Worms, and thousands of other parasitic worms which we do find in our times were either not in existence during the times of *Chazal* or were uncommon enough that *Chazal* did not discuss them.²¹

To try to give some credence to this assertion, the individuals who recently brought the *shaila* to the *rabbonim* attention suggested that perhaps due to pollution and global warming, Anisakis and Cod

¹³ קבלתי מכתב מהגאון ר' שמואל שמעלקע פרידמאן מטעם ההתאחדות משנת תשנ"ד להגרי"ש וואזנר שליט"א.
¹⁴ קבלתי כתב יד מהגאון זצ"ל.
¹⁵ כך שמעתי מתלמידהם.
¹⁶ ע"י ספר בדיקת המזון כהלכה מהר"מ ויא שליט"א.
¹⁷ ע"י שו"ת שבט הלוי ח"ד ס' פג, וה"ז סי' קכ"ז. ומה שפלפל שם שיהא אסור ג"כ מטעם יוצא מן הטמא, כבר חלק עליו כל הפוס' בשעתו בזה, שאף שנמצא כן במג"ה מצ' קל"ג, מ"מ ע"י חו"ד סי' פ"א סק"א דלא אמרינן כל היוצא מן הטמא טמא בדגים טמאים דהרי צירם מותר מן התורה ע"י"ש, וע"י יבין דעת יו"ד פד:יד שכתב ג"כ, ע"י"ש, וע"י חו"ד שם סק"ב שחזן מדין אבר מן החי שיצא מבריה טהורה אין לאסור שום דבר שיצא מבריה הטמאה, מלבד מה שיש עליו דרשה מיוחדת, ומהגר"ש מיללער שמעתי שממ"נ יש צד להקל דאם הוי דין יוצא מהטמא א"כ אין בו חומרת בריה ויש להקל בהרבה פעמים להחשיבה תערובת וא"כ בטל, ואם יחמיר שהוי דין בריה בפנ"ע א"כ לא שייך הדין יוצא מן הטמא, וע"י חו"ד הנ"ל בסק"ב. וע"י חזו"א יו"ד סי' יג סקי"ג שאין בו דין אבר מן החי, ובתשובת הרב מדברעצין זצ"ל האריך בזה להקל, וכן בתשובת הגר"י בעלסקי שליט"א, והרב פאלק שליט"א, ואכמ"ל.
¹⁸ כך שמעתי מהר"מ ויא שליט"א ששאל אז מרנן שליט"א.

¹⁹ כך שמעתי מהר"ג בעס שליט"א, וכן איתא במכתב מר' רוח שליט"א שהם היה מהעסקנים שהלך לכמה גדולי א"י בענין הזה.
²⁰ שמעתי מהרבה עסקנים ששאל מרנן שליט"א בעבור זה והוא השיב שסמך על בדיקת ב"ד של הגר"ש וואזנר שליט"א.
²¹ ע"י שו"ת שבט הלוי הנ"ל, ושו"ת להורות נתן סי' כה.

Worms are more common in our generation. Additionally, some claimed that these Anisakis and Cod Worms predominantly migrate postmortem because of the fish not being gutted properly.²²

It is based upon these findings that Rav Elyashiv, Rav Wosner, and a number of other *gedolei Eretz Yisroel*, issued letters that although people were previously lenient, it is now time for people to act stringently and refrain from eating fish containing such worms.²³

THE OPINIONS OF THE RABBONIM WHO PERMIT

There seem to be two approaches amongst the *rabbonim* who permit the consumption of fish containing the worms, despite the above indications.

Many of the *chassidische poskim* who permit the fish take the words of *Chazal* at face value and maintain that *Chazal* believed in spontaneous reproduction and it is unreasonable to say that the worms we find today are different than the worms that *Chazal* discussed. Some have also furnished scientific reports which state that the scientific belief that the fish originate as part of a lifecycle initiated by larvae excretions of mammals is only a hypothesis and is not a scientific fact. Therefore, they claim that to establish that the origination of these worms differ from *Chazal's* description, we need conclusive proof or at least very convincing evidence. Since these *rabbonim* discredit the above indications, as will be demonstrated below, and we on our own do not observe any evidence

contrary to what was stated in *Chazal*, we have the right to take the words of *Chazal* at face value.²⁴

Many of the *Litvishe poskim* who permit the fish maintain that even if we do accept the contemporary scientific belief that the worms originate from outside the fish, they are still *mutar*. *Chazal* were masters in science in addition to having a special *hasgacha* formulating *halacha* and although they may have described their reasoning obscurely, it is our obligation to toil in order to elucidate it and reconcile it with contemporary scientific beliefs. The *halacha* does not change. They claim that this has been the opinion of many *gedolei Yisroel* who were consulted regarding this very *shailah* years ago.²⁵

We will discuss their reasoning in the following two sections. The first section will focus on the first approach, analyzing the aforementioned indications, and the next section will discuss the latter approach.

THE FIRST APPROACH - ANALYZING THE INDICATIONS

Various individuals spent a significant time researching this entire matter and questioned the indications on which this *shailah* was based and which resulted in the stringent ruling by *gedolei haposkim* in Eretz Yisroel.

At a recent meeting of *rabbonim*, one of these individuals, gave a two-hour presentation producing a plethora of reports to demonstrate that there is no convincing indications that the worms found in the flesh of fish originate from outside the fish. He therefore maintained that there is no compelling reason for us to be forced to say that the *metzius* changed from the times of *Chazal* and the *Shulchan Aruch*.²⁶

²² כן איתא במכתב מר' רוה שליט"א.
²³ המכתבים מפורסמים, מ"מ יש תשובה מרב משה חיים פדווא שליט"א שכתב שם שאפ' אם תאמר שהתולעים אסור, מ"מ אם החשש שנמצאים שם הוא רק מיעוט ומצוי, אין להיבט מפני כן בדיקה, וטעמו, כיון שאף תולעת שנמצא בבני מעיים אסורים רק מספק כמו שמובא לעיל, וא"כ יש ספק ספיקה, אולי לא נמצא בדג זה כלל, ואף אם נמצא אולי מותר, ועי' בש"ך בכללי ס"ס אות ל"ה דבמקום שיש ס"ס גמור אינו צורך בדיקה אע"פ שיש לברר האיסור ע"י בדיקה, והגם שכתב שם שיש חולקים ע"ז ויש להחמיר היכא דאפשר ואין הפסד בדבר ע"ש, מ"מ בנו"ב ועוד כתבו דכ"ז כשיכולים לברר ב' הספקות, אבל אם יכולים לברר רק ספק אחד לכו"ע אין חיוב בדיקה, עי"ש בפ"ת סק"א. ועי' ש"ך שם בס' ק"י סקנ"ו דבס"ס יש להקל אפ' בדבר שיש לו מתירים, עי"ש. ואין ללמוד מזה היתר לתולעים בכל ירקות שהתם אם דרכו להתליע במחובר הוא כודאי, ורק ברזונקיס הקיל הט"ז שדרכו להתליע בתלוש, והוא ס"ס גמור, עי"ש. וכתב שם שדיבר בענין זה עם הגאון ר' ניסים קארעליץ שליט"א ואמר לו שכן הוראתו שאם ידוע לו שיש תולעים בחתיכה אשר לפניו יש להוציאם אבל א"צ לבדוק אחריהם, וכתב שם שכן הורה הגר"ש וואזנר שליט"א.

²⁴ זהו שיטת ההתאחדות הרבנים, ועי' שו"ת משנה שלימה סי' לא מדומ"ץ בעלז, ושאר פוסקים. ועי' שו"ת מהר"ם שי"ק יו"ד סי' רמ"ד שכל זמן שלא נתברר לנו ברירות נשאר הדין בחזקת שלא נשתנה.
²⁵ תשובת מר' פאלק שליט"א, הגר"י בעלסקי שליט"א, ר"מ ויא שליט"א, וכך שמעתי מהגר"ש מיללער שליט"א (מ"מ בזמן האחרון לא רצה לפרסם היתר אחר ששמע שהגר"ש אלישב שליט"א החמיר בזה), וכולם סברו דבשאלות כאלו כך היא מסורתם לתרץ הדברים שקשה מעניני טבע, ולא לשנות הלכה, והביא כמה דוגמאות לזה.
²⁶ הפסקן הגדול שדרש אז היה ר' משה יוסף בלומנברג שליט"א מבי"ד של טרטקב.

We will briefly delineate the retorts they offered to dismiss the indications on which this *shailah* was based.

Indication 1: Same Type of Worm Found In Stomach and In Flesh

Many of the worms found in the flesh are deeply embedded. Additionally, they are lying dormant. Therefore, some questioned why one can't safely assume that they were created in the location where they were discovered, just as *chazal* state. The fact that you find the Anisakis worm inside both the stomach and the flesh, they claimed, should be no indication that they migrate from the stomach to the flesh. Perhaps, the fish produces these worms in both the stomach and in the flesh. The only reason why we cannot eat the worms in the stomach is because of the possibility the fish may have also swallowed worms. Therefore, when worms are found in the stomach the *poskim* say it is forbidden *misafek*. However, in the flesh *chazal* confirm to us that they were definitely created there.

In fact, this observation of finding them in both locations is not new to the Torah World. It is already discussed by some *rishonim*, who describe the characteristics of these worms in a manner which strongly resembles the worms we presently find.²⁷ Additionally, approximately twenty years ago, people presented this very *shaila* to the *beis din* in Antwerp, claiming to find these worms in both locations, and the Rabbonim, including Rav Padawa zt"l and *yblc"t* Rav Falk *shlit"a* and Rav Tuvia Weiss *shlit"a*, were all *matir* it nonetheless.²⁸

Moreover, some demonstrated from a scientific viewpoint, that there are so many subspecies of the Anisakis worm, and scientists can differentiate through subtle differences which subspecies they

believe are part of which lifecycle and originate from which type of larvae excretions. Scientists are constantly discovering additional varieties of the Anisakis worms and keep on creating new subspecies and reclassifying them. Therefore, they said, just because it appears to us to be from the same species found in the stomach and the flesh, perhaps, in fact, they are not the same species. Just as ongoing scientific research keeps producing new subtle differences, resulting in new sub-species categories, perhaps one day they will realize that *Chazal* were correct and the Anisakis worm found in the flesh may indeed be different than those found in the stomach that originated from outside the fish.

Furthermore, many statistical reports demonstrate that it is very uncommon to find these worms in the stomach of Salmon and we generally only find them in the flesh. Therefore, the fact that some fish may have them in both locations is not necessary any indication of migration.

Additionally, some explained that there might as well be Anisakis worms found in the stomach which may have in fact migrated from the flesh to the stomach, rather than vice versa. Indeed, some of the early *poskim* mention such a concept.²⁹

Therefore, some questioned that if this entire issue of sub-classification is so relatively new to the world of science, why should we be compelled to place present scientific hypothesis against the words of *Chazal* and the Shulchan Aruch's unequivocal *heter* and claim that *nishtaneh hatevah*?³⁰

²⁹ ע"י הגהות שערי דורא אות מז' שרגילין לצאת מקתן ולחזור, "ולפעמים נמצאים במיעהם" אותן התולעת, ע"ש.
³⁰ ע"י שו"ת מהר"ם שי"ק יו"ד סי' רמ"ד שכל זמן שלא נתברר לנו ברירות נשאר הדין בחזקת שלא נשתנה. ומה שהביאו מדברי חזו"א יו"ד סי' יד סק"ח שהוא סמך על ספרי הטבע להכריע שהתולעים נולדים מבחורין, כתב הגר"י בעלסקי שליט"א שהמעין יראה שאמר כן רק לגבי כינים המדובקים על גבי עור הדג מבחורין, שעל זה לא נמצא שום דבר בגמ' אם מיניה קא גבלי או באים מבחורין. ובתשובת רב פאלק בענין זה כתב, סברא להתיר שאף אם תולעים אלו נמצאים במעיים אין לומר שבהכרח עוברת מהמעיים לבשר, כיון שבאים מחורין ע"י lifecycle, א"א במציאות שיהיה דבר כזה שתולעת הנמצאת בבשר הדג לא יהיה ג"כ בתוך המעיים, ולא מפני שעוברת, אלא והסיבה לזה שאם הדג בולע דג קטן ודג קטן הזה יש לו תולעים שנלדה בבשרה שמותר, מ"מ אחר שיתעכל בשר הדג במעיים של הדג הגדול, נשאר התולעת שם שאינו מאוכל, שהמעיים אינם הורגו, כידוע שיש אנשים שיש להם מחלה מפני זה במעיים, נמצא שאותן התולעת שהיה מלפני כן בדג אחד תוך בשרה שמותר נמצאת ג"כ בתוך המעיים של דג אחר. והגם שעכשיו אסור לאכול אותו התולעת מספק גזרו שלא יטעה בין תולעת אחת במעיים שמותר ותולעת אחר שבולע

²⁷ ע"י הגהות שערי דורא אות מז' שרגילין לצאת מקתן ולחזור, "ולפעמים נמצאים במיעהם" אותן התולעת, ע"ש, וכן איתא בשולחן גבוה סי' פד סקנ"א, ותאירו שהוא דקים ארוחים ולבנים שנים ושלושה כרוכים זה בזה תחת בני המעיים סמוך לטבורו, וזה ממש המציאות שלנו, ע"ש. ואולי יש להביא ראי' מהרמב"א בהל' מאכ"א ב:יז שהחמיר לאסור גם כשנמצא בבשר הדג, שיש לחשוש שבא לשם מחורין, וע"י במ"מ שם שפירש איך הרמב"ם למד הגמ' בחולין שם, מ"מ מדאחלקו כל הראשונים עליו, וכן מדלא הפסיק השו"ע כמותו, אולי יש להביא ראייה שהם מתירים אפ' אם יש חשש שבא מחורין, או משום שהם סוברים שכאן נמצא כאן היה, או מפני שכל שבא לשם מחורין ע"י גלגל החיים לא נאסור ודינו כמניה גבליה.
²⁸ כן איתא בקונטרס אור ישראל שהאריך בהטענות שגרם הרעש אז באנטוורפן.

Indication 2: Infestation in the Area of the Belly Flaps

Regarding the claim that there is a greater presence of Anisakis worms in the area of the belly flaps, indicating that the worms originated from the stomach, the *matirim* maintain that this is far from conclusive. In fact, in many fish, the worms are far more commonly found in the double fillet. In some fish, it depends upon the season, the location of capture and the age of the fish.

Additionally, although at one point scientist did indeed hypothesize that the reason why many fish have a greater presence of worms in the belly flaps, is because they migrated from the internal cavity. However, scientists have since then refuted this hypothesis for a number of reasons. Firstly, in younger fish the width of the belly flap is approximately 1/2 of an inch. The worms are found in the first 1/4 of an inch. We do not find any proportional pattern to have these worms further embedded in older fish as the belly flaps grow to an inch thick. Moreover, as mentioned above in certain fish there is a greater abundance in the double fillet than in the belly flaps area. Basically, in order to establish any theory, we would have to have some sort of pattern to give credence to the theory. In this case, no pattern exists. On the contrary, the lack of pattern indicates that it is not hinged upon any migration from the stomach area. Therefore, to establish indications, claim the *matirim*, based upon minimal laymen research defies all normative statistical researching procedures.

In fact, some scientists suggest that the worms may just find the belly flaps area more comfortable to be in, either due to its fattier portion or for some other reason. Therefore, in many fish, they may migrate to that area even from other areas in the flesh.³¹

Indication 3: Protruding Worms

We mentioned above, that the occurrence of finding protruding worms into the internal cavity has already been alluded to by some *rishonim*, who permitted them.³² The *matirim* proved that it is impossible to tell without much experience and the use of a microscope which side is the head of the worm and which side is the tail, since these worms are so tiny. Therefore, when the *rishonim* permitted fish that

כשהוא בריה בפנ"ע ואסור, מ"מ אין יכול לעשות רגלים מדבר מפני שמצא תוך המעינים אותו מין תולעת, בהכרח שעוברת מהמעיים לבשר.³¹
מדרישה אצל מומחים.³²

עי' ציון 27.

had protruding worms, they had to permit all worms even worms whose head is pointing towards the flesh indicating that it is originating from the internal cavity.

Indication 4: Farmed Fish Distinction

In response to the claim that the worms are found in the flesh of wild fish and not the flesh of farmed fish, the *matirim* maintain that perhaps this is simply a result of the nutrition of the fish, and, again, there is not sufficient indication to contradict the words of *Chazal* and prove that the worms are part of a lifecycle originating from mammals. Additionally, as mentioned above, this distinction was already presented to Rav Moshe zt"l approximately thirty years ago by the *belzer dayan*, and he was not fazed by this observation.³³

Indication 5: Postmortem Migration

The *matirim* also discuss the claim of postmortem migration which was raised recently. There are dozens of studies, they say, stating that that the Anisakis worms are found in the flesh while the fish are still alive, unlike what others have suggested that the migration to the flesh occurs only after death when the fish are not gutted properly.

In fact, at one point science did believe that although worms do exist in the flesh while the fish is alive, postmortem migration does nonetheless frequently occur if the fish is left ungutted for a number of days. However, there are various recent reports where scientist refuted this original theory. They examined a lot of fish shortly after capture, those placed on ice, those left ungutted, and those gutted in the same manner as they are gutted commercially, and there was no greater incidence of infestation in any one of the processes. The only instance in which there was increased infestation was in the uncommon case of a fish being left in a warm temperature for 24 hours prior to being gutted and properly cleaned. The standard procedure is to gut the fish shortly after capture, unless the fish is frozen.

Additionally, many of the Anisakis worms are found deep in the flesh and encapsulated by the flesh, indicating clearly that they were there while the fish was alive, as encapsulation cannot happen after death.³⁴

³³ שו"ת משנה שלימה סי' לא.

³⁴ מדרישה אצל מומחים.

Synopsis of this Approach

Those who raised the original *shailah* countered these arguments by stating that the indications they originally presented are strong enough to support the claim that perhaps these worms are not the worms that *Chazal* permitted. The scientific world is convinced that they originate from the outside. This, they claim, adds further credibility to the original indications which they discovered.³⁵

The *matir*, following this approach, feel that since none of the above indications, in their opinion, have any basis, one may safely continue the status quo, and continue eating the fish we have been eating for years. Additionally, they claim, that it is highly unreasonable to say that only after *Chazal's* worms became extinct, these worms came around, for if they were in existence during *Chazal's* times, then *Chazal* could not have issued a blanket statement that all worms found in the flesh of fish are permitted. Moreover, *Anisakis* is documented to have existed as early as the 12th century.³⁶

Contemporary *rabbonim* who are *matir* the worms, point as well to the fact that this is an issue which affects almost every type of fish we eat and have been eating for generations - and claim that the wide ramifications of the *shailah* in addition to the many statistical inaccuracies of the above indications was not properly presented to the *gedolei Eretz Yisroel* who ruled stringently.

THE SECOND APPROACH – THERE IS NO CONTRADICTION BETWEEN CHAZAL AND CONTEMPORARY SCIENCE

As mentioned above, many of the *Rabbonim* who permit the fish maintain that even if we do accept the contemporary scientific belief that the worms originate from outside the fish, they are still *mutar*. *Chazal* were masters in science in addition to having a special *hasgacha* formulating *halacha* and although they may have described their reasoning obscurely, it is our obligation to toil in order to elucidate it and reconcile it with contemporary scientific beliefs. The *halacha* does not change. They claim that this has been the opinion of many *gedolei Yisroel* who were consulted regarding this very *shailah* years ago.

³⁵ כך שמעתי מהר"ג בעסס שליט"א.

³⁶ American Microscopical Society April 1976, וכן איתא בשולחן שלמה הנ"ל שנדפס בשנת תקכ"ג, וגם הקיצור שו"ע סי' מו דיבור אודות תולעים "שבהערינג" שהם בודאי תולעים שלנו המכונה בפי ההמון הערינג ווארם.

Reconciling Contemporary Science with Chazal

Suggestion 1:

Some suggest that even if we accept the origination of these worms to be part of a lifecycle initiated by copepods or shrimp swallowing larvae, nonetheless, *chazal* considered the worms to have originated within the fish. They explain that since the larvae are microscopic in the sea, at the time they are swallowed they are *halachically* non-existent, and therefore *Chazal* considered them to have developed within the fish. It is these worms which are found inside the flesh and the ones *Chazal* permitted. The stomach, however, may also contain regular worms which the fish swallowed when they were much larger, and therefore, said *Chazal* forbade the worms found in the stomach *misafak*.³⁷

Some questioned this approach based upon a scientific report claiming that the larvae ingested by the crustaceans are *not* microscopic. However, the *matirim* have demonstrated many reports clearly stating that they are indeed microscopic and said this only report indicating that the larvae are not microscopic was written by a medical doctor whose expertise is not in parasitic studies related to marine life.³⁸

Suggestion 2:

Another option suggested by some *poskim* to reconcile contemporary science with *chazal* is based upon the terminology of *Rashi* in describing the permissibility of the worms found inside the flesh. *Rashi* states that since their growth occurred in the fish, they are permitted.³⁹ Therefore, these *poskim* maintain that there is a difference between parasitic worms and regular worms that fish might swallow. Ordinary creatures which reproduce from regular eggs, their eggs contain all the nutrients for the development of the organism. Parasites, however, hatch from very simple eggs, and their entire development comes from latching on to a host organism. Without that, they would have no means of survival and development. The worms that *Chazal* were *matir* are parasitic worms, whose entire growth and development had to occur inside the fish. It is therefore considered as if it originated there and does not have the status of *Sheretz*

³⁷ תשובת הרב פאלק שליט"א, שיטת הר"מ ויא שליט"א, וכן הסכים הגרש"ז אויערבך זצ"ל, ועי' לקמן.

³⁸ מדרישה אצל מומחים.

³⁹ רש"י בחולין שם.

hamayim. This is unlike ordinary worms found in the fish's stomach, which the fish swallowed at a later stage.⁴⁰

The *poskim* following this approach maintain, that even if none of these reconciliations are appealing, then it is our obligation to come up with another explanation, in same manner as we would do for every other *sugya* in *shas*. However, the *halacha* does not change.⁴¹

Synopsis of this Approach

In summary, these *matir* accept the idea that these worms have originated at some point from the outside of the fish, nonetheless, since *chazal* unequivocally say that they are *muter* the *halacha* does not change. It is our obligation to toil as we would do for any other *sugya* in *shas* and try to clarify and elucidate *Chazal's* reasoning in the light of contemporary scientific knowledge. *Chazal* were masters in science in addition to having a special *hasgacha* formulating *halacha* and although they may have described their reasoning obscurely, it is our obligation to elucidate it.

These *matirim* claim that there are thousands of types of such parasitic worms and they are found in almost every fish in the ocean. It is reasonable to assume that these worms have always existed and are the very same worms that *Chazal* discuss, since there are no indications of any change in nature. It is unreasonable to state that there has been a climatic or procedural change from the times of *Chazal*.

The Opinions of the *Gedolim* of the Previous Generation

Reb Shlomo Zalman Auerbach zt"l

⁴⁰ תשובת הגר"י בעלסקי שליט"א.

⁴¹ ויש עוד מהלך בפוס' להתירו, דהתורה נמסרה לנו לכל הזמנים ולכל המקומות, ואין צריך לעשות חשבונות ע"פ חכמי הטבע לברר שום דבר, אלא נקבעת כפי שנראה פשוט לעין, אף אם יבורר באופן ברור שע"פ הטבע אינו כן, מ"מ הלכה לא נשתנה, וכמו כן איתא בחזו"א לענין שיעור *pie* לענין סוכה, וכן שמעתי מהגר"ש מיללער שליט"א לענין לעשות חשבונות לזמן השקיעה ע"י refraction של החמה, וכמה דברים, והוא בין לקולא בין לחומרא, ועי' מהר"ל בס' באר הגולה בריש באר השישי, וז"ל כי לא באו חכמים לדבר מן הסיבה הטבעית כי קטן ופחות סיבה הטבעית, אבל הם ז"ל דברו מן הסיבה המחייב הטבע עי"ש, ועד"ז ביאר כמה מדברי חז"ל שנראים סותרים למציאות הטבעי.

Rav Moshe Vaya, one of the foremost Torah experts globally on insect infestation and *bedikas tolain* in food, says that he presented this exact *shailah* to Rav Shlomo Zalman Auerbach *zt"l* years ago, and Rav Vaya told Rav Shlomo Zalman that the worms are found inside the stomach and inside the flesh. Rav Vaya described the entire lifecycle of these worms as well. Rav Shlomo Zalman was very firm in his response, stating that *Chazal* clearly said that worms found inside the flesh are *mutar*, and that this is the final *halacha*.

Rav Vaya related to Rav Shlomo Zalman that perhaps we can reconcile *Chazal's* statement that they spontaneously reproduce inside the flesh with contemporary scientific belief that they originate from larvae outside the fish based upon the microscopic explanation offered above. Rav Shlomo Zalman liked this explanation very much.

Rav Vaya says that the feeling he got from speaking to Rav Shlomo Zalman was not that the reason why he was *matir* the worms was because our evidence is based on scientific reports but that if we ourselves had indications it would change the issue. Rather, he was *matir* simply because *Chazal*, who were experts in areas of science and had special *Hashgacha* when formulating the *halacha*, ruled that they are permitted. Thus, the *halacha* does not change and we are forbidden to think that they erred, *chas veshalom*. To assume that *nishtaneh hatevah* – that nature has changed - without concrete evidence of a change in nature is also not reasonable, explained Rav Vaya. Therefore, it is our obligation to find methods to reconcile the words of *Chazal* with science, and it is for this reason, he says, that Rav Shlomo Zalman was happy with the microscopic *sevara* which serves this very purpose.⁴²

The *Minchas Yitzchok*

Rav Vaya also presented the *shailah* to Dayan Yitzchok Yaakov Weiss, the *Minchas Yitzchok*, in the same manner, describing as a matter of fact the *metzius* - that we find the same worms in the stomach and in the flesh. In a lengthy *shailah* that he penned to Dayan Weiss, Rav Vaya only touched upon scientific reports

⁴² כך שמעתי מהר"מ ויא שליט"א, ותמוה איך שייך שאנשים אחרים לטעון שזה לא היה כוונתו, אם האדם האחד שדיבר עם מרן זצ"ל בענין זה היה ר"מ ויא שליט"א.

briefly towards the end of his question. Dayan Weiss was also unequivocally *matir* the worms.⁴³

Reb Moshe Feinstein zt"l

It seems that Rav Moshe Feinstein took a similar approach when dealing with this *shailah*. Rav Moshe, close to thirty years ago, was approached by two *rabbonim* who brought many scientific reports to show Rav Moshe. Rav Moshe refused to even examine any of the evidence, stating that it does not matter what evidence they showed him, since the *halacha* won't change, as *Chazal* say it is *mutar*. Rav Moshe was very firm about it. They asked him if he would write a *teshuvah* on this matter. Rav Moshe smiled and asked, "You need me to write a *teshuvah* to reaffirm what is already printed clearly in the *Shulchan Aruch* so unequivocally?"

The *matirim* strongly believe that Reb Moshe zt"l would still be *matir* nowadays, as had it been possible for an indication to sway Reb Moshe's opinion and consider the option of *nishtana hateva*, he would have been open to examine the evidence. For all he could have known, was that the people standing in front of him might have had some x-ray technological reports videoing the worm entering the fish and borrowing into the flesh. Reb Moshe, could not have been so firm and refuse to look at any reports, had he not taken the above approach that *halacha* does not change and we must toil to enlighten the reasoning of *chazal*, in light of any information we presently have.⁴⁴

Relying on the Opinion of the *Gedolim* of the Previous Generation

The *matirim* claim that even if the indications that were presented to the contemporary *gedolei yisroel* are accurate, then at the very least, it is quite reasonable to say, we would nonetheless have a *machlokes haposkim*, with Rav Moshe, Rav Shlomo Zalman, the Minchas Yitzchok, and others strongly permitting the consumption of these worms based upon the seemingly same *shailah* which they responded to years ago.

⁴³ קבלתי מכתב שכתב ר"מ ויא שליט"א לבעל המנחת יצחק, והוא השיב לו בעל פה והיה רוצה לכתוב תשובה בעבור זה, אבל השי"ת החזיר נשמתו טרם לכך.

⁴⁴ כך שמעתי מר' יהזקאל מייזעלס שליט"א ששאל אז מרן זצ"ל, ועי' שו"ת משנה שלמה סי' לא.

Those who recently raised the *shailah* countered these arguments by stating their belief that the only reason why the *rabbonim* of the previous generation were *matir* these worms was because they did not believe the scientists when their word contradicts *Chazal*. Now, however, it is not just a matter of whether we believe the scientists that the worms found inside the flesh originate from the stomach and from outside of the fish. We, ourselves, have an indication of this well. Therefore, they are not convinced that these *gedolim* would have permitted the fish in these times.

The *matirim*, however, stress that the ones who consulted the *rabbonim* of the previous generation are still alive, and they strongly believe that the *shailah* nowadays is the same as when they spoke to the *rabbonim* of the previous generation. Additionally, the feeling they got from speaking to the *rabbonim* was not that they were *matir* because we don't believe the scientists. Rather, they were *matir* simply because *Chazal*, who were experts in areas of science and had special *Hashgacha* when formulating the *halacha*, ruled that they are permitted and the *halacha* does not change. Therefore, it is our obligation to find methods to elucidate the words of *Chazal* in light of contemporary scientific knowledge.

HERRING

These parasitic worms are commonly found in herring. In fact, the *Anisakis* worm is commonly referred to as a Herring Worm, even when found in other types of fish.

Some *poskim* maintained that based on the facts that were presented to them, the presence of parasitic worms in the flesh of herring is a much smaller percentage than in the other types of fish, and therefore there are grounds to permit the consumption of herring. These *poskim* considered the infestation level in herring to be classified as a *mi'ut hamotzui*, for which there is only an obligation *Miderabonon* to check. Therefore, they said, in cases where there is only a rabbinic obligation to check, and checking is impossible even under ultraviolet light due to the color of the herring, one is exempt of this obligation and may assume that there are no worms in the piece of herring one is set to consume.⁴⁵

⁴⁵ כך הורה הגרי"ש אלישב שליט"א, ועי' ש"ך בסי' פד סעי' ט' לענין בא זאב ונטל הבני מעיים שא"א לבדוק ושרי, וכן אחר בישול, עי"ש, וה"ה כאן.

Others contended that one can indeed find worms in herring by performing an inspection. Additionally, scientists have found by using a pepsin digestion method, that 70% of Norway herring fillets are infested with these worms, thus making the obligation to check the fish *min haTorah*.⁴⁶

Therefore, there are those who say that if one would forbid these worms, one would have to forbid all herring as well.

GROUND FISH

All agree that fish may be ground, such as gefilte fish, when making salmon patties, or a salmon spread. Even if there is a worm inside the fish, it would be *botul*. Although we generally say that insects are not *botul*, that is only when the insects are whole, but once they are ground, they are *botul*.⁴⁷

CANNED FISH

The *Rashba* maintains that cooking food containing worms does not necessarily disintegrate the worms and the cooked food remains a *safeik*.⁴⁸ Some claim that in canned fish which are heated in a pressurized retort that is heated up to a few hundred degrees for a few hours, the worms definitely become disintegrated. Even the fish inside the actual can may reach 250 degrees Fahrenheit.⁴⁹ Some claim to have found worms in canned fish that were still whole. Even

if this is true, it is debatable how rare of an occurrence this is.⁵⁰ Some *poskim*, maintain, that there are additional reasons to permit canned fish, even according to the *poskim* who forbid these worms (see footnotes for an elaboration).⁵¹

CONCLUSION

The shailah of parasitic worms in fish was discussed by gedolei haposkim approximately thirty years ago. Recently, there were those who claimed that they themselves found indications that the worms found in the flesh of fish indeed migrate from the stomach to the flesh and the shaila should therefore result in a different ruling than it did when analyzed years ago. They presented the shailah to the gedolei Eretz Yisroel, many of whom ruled stringently.

The rabbonim who are matir say that this is an issue which affects almost every type of fish we eat and have been eating for generations and not only to certain exotic fishes, as these parasites are found in almost every fresh water fish. They claim that the wide ramifications of the shailah in addition to the many statistical inaccuracies of the above indications was not properly presented to the gedolei Eretz Yisroel who ruled stringently.

Additionally, the matirim feel, that it is, at the very least, a machlokes haposkim, with Rav Moshe Feinstein and Rav Shlomo Zalman Auerbach being matir even today.

As we stated at the outset, it is not our intent to issue a p'sak, but rather to provide an overview and present a synopsis of the various opinions.

⁴⁶ כך שמעתי מר"מ ויא שליט"א ומשאר מומחים, שהרבה מהם מוחזק בתולעים. ויש שהעירו דאם שרי דברים שיש בהם מיעוט המצוי כשא"א לעשות בדיקה למה נוהגים כל ועדי כשרות להחמיר בירקות אחר שערבם לסלט, שא"א עוד לעשות בדיקה, ואם מעיין בש"ד שם יש ב' תירוצים, ומנהג להחמיר לפי תירוץ שני שרק במקום ספק ספיקה אנו מקילים. מ"מ יש לומר דכל הנידון להחמיר הוא רק בדבר שהיה אפשר לעשות בדיקה ולא עשה ועירבם בדבר שעכשיו קשה לעשות בדיקה, אבל דבר שמתחלה א"א לעשות בדיקה בלי להשחית המאכל לגמרי, יש להקל והוא דומה לחלב מבהמה שהוא ספק טריפה וסומכים על רוב בהמות כשרים אף אם הוא מיעוט המצוי טריפה, מ"מ א"א לעשות בדיקה בחיים. ועע' מש"כ בפרק לעיל בענין רוזנקס.

⁴⁷ עי' ביו"ד סי' פ"ד סעי' יד שמותר לטחנם, ועי' ש"ך שם בסק"מ דבספק איסור ואינו מכוון לבטלו מותר, והכא כל האיסור הוא ספק שאף אם מצא בני מעיים היו רק ספק איסור כדלעיל, ולכן אף אם מוחזק בתולעים יש צד להקל, ועי' בפרק לעיל בדין לבטל ירקות כשאינם מכוון לבטלו, והאריכו שם בכללים אם צריך שיודאי יבטל, וגם אם יש מתירים אף כשיש ודאי איסור ולא רק במקום ספק.

⁴⁸ עי' שו"ע בסי' פ"ד סעי' ט ועי' בש"ך שם לענין אם עבר ובישול, ויש ס"ס ספק אם נמצא שם וספק נמוח, ומשמע משם שאם הוא רק ספק ביטול אסור לבטלו לכתחלה, ועי' בפרק לעיל שהאריכו בזה לענין לבטל תולעים הנמצאים בירקות ע"י בישול.

⁴⁹ וא"כ יהא מותר לבשלם לכתחלה ע"פ הכללים שבארנו בפרק לעיל לענין ירקות. ואף אם הוא מוחזק בתולעים מ"מ כל האיסור הזה רק ספק עי' לעיל.

⁵⁰ מדרישה אצל מומחים משמע שכמעט לא נמצא שם אחר הבישול.

⁵¹ יש סברא להתיר דיש ג' ספקות, ספק אם הוא שם, התלעים אלו הם רק ספק איסור כדלעיל, וגם ספק נימוח אחר הבישול. וגם יש נידון בכלל אם תולעים אלו יש להם חומרא של בריה דאינו בטל, עי' מש"כ בציון 17 בשם הגר"ש מיללער שליט"א, ובתשובת הגר"י בעלסקי שליט"א הביא דעת המנ"ח מצ' קס"ג שרק לוקה על כזית מדרני דבשרא אף כשהם שלמים, ועי' ט"ז ביו"ד סי' ק' סק"א שרק החמירו לחשוב בריה על מה שלוקה פחות מכזית. וגם בספר יבין דעת סי' פ"ד סקי"ד הכריע שאינו בריה. וגם יש אומרים שבספק איסור אין בו חומרת בריה כיון שדין בריה הוא רק מדרבנן וספק רבנן לקולא, ולכן אף אם יש ספק אם נתרסק ע"י הבישול, מ"מ ודאי נחשב תערובות אחר הבישול, שכמעט לא נמצא שם תולעים מעולם אחר הבישול, ולכן מותר כיון שבטל. ואף מותר לבשלו לכתחלה כשיש ודאי ביטול, עי' לעיל. יש שהעירו שאולי אף אם תאמר שתולעים אלו מותר, מ"מ כשפרשו אסור, ואולי פירשו למים תוך הבישול, מ"מ מה איכפת לנו בזה אם יהיה בטל מ"מ בתערובות.