A Rebuttal
To Factor #2 (Overutilization)
of the Petition
To have the Monarch Butterfly
Protected under the Endangered Species Act

By

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Synopsis

In August of 2014, a Petition was filed with the Department of Interior, to have the Monarch Butterfly (Danaus Plexippus Plexippus) protected under the Endangered Species Act. The Petition lists several reasons as rationale for having the Monarch butterfly listed as a threatened species. After careful review of the Petition, it appears that the evidence provided is pointing more to the possibility of a threatened habitat and related migration of the Monarch, than the Monarch itself.

We share in the appreciation of the Monarch, and want to support any effort to correct harmful trends that would adversely affect the Monarch butterfly. We therefore, applaud the overall intent of the Petition. However, there is one section in the Petition – Threat Factor #2, that we consider to be inaccurate and unsupported by scientific data. The objective of our rebuttal is to point out the discrepancies in Factor #2 of the Petition, and correct the mistakes therein.

In the pages that follow, I will introduce my farm, and describe briefly our operation and the protocol we follow for production. I will list the claims made in Factor #2, and provide our rebuttal for each claim. In addition, I will provide supporting scientific data for our rebuttal, and close with evidence demanding further study, as well as our request for particular exemptions.

Introduction

We only do one thing at Utterback Farms – we raise Monarch butterflies. We are the largest Monarch butterfly farm in the United States. We have been raising Monarch butterflies for over 20 years, and are devoted to producing beautiful, healthy butterflies that are ecologically safe and friendly.

We are proud to see our butterflies used in so many positive ways. Our butterflies are used to bring joy and create beautiful memories at weddings and other happy events, and they help inspire the sentiment of peace and comfort at memorials and funerals as well.

They are also used for education at exhibits and special school programs, and our released butterflies help the environment by replenishing the wild Monarch population with beautiful, healthy, disease-free stock.

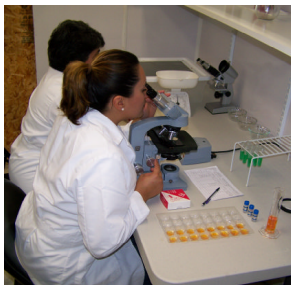
Our Product – Monarch Butterflies

Our butterflies are often praised for their size and beauty. In order to maintain a safe record, we periodically have our butterflies tested at a qualified lab to verify their health. The tests consistently show that our butterflies are cleaner, healthier, larger, more vibrant in color, and are equal in vigor, when compared to those in the wild.

Another aspect to mass rearing Monarchs is the need to have lots of milkweed on hand to feed the caterpillars. We have 6 greenhouses of the finest quality milkweed available.

We clip, sterilize and feed 100 lbs. of milkweed every day. To run a Monarch farm of our capacity requires the best in agriculture facilities and experience.

Our Production Facility



One important aspect of operating an insectory where mass rearing takes place is the need to control the environment. This is necessary to assure health, and precision in timing.

Our labs utilize the most advanced technology and procedure in order to achieve our goals of producing the absolute finest and healthiest Monarch butterflies.

We not only follow a strict code of ethics and professional protocol in how we operate our production facility, but our stock is subjected to one of the highest quality standards in the industry. Each week, our stock is inspected and analyzed by our Quality Control Lab, and receives our specialized *Seal of Approved Quality*, before every shipment.

The Petition

There are five possible reasons for filing a Petition, and the petitioners have used all 5 in their approach in the "Petition to have the Monarch Butterfly Protected under the ESA."

Factor One is Habit Loss & Degradation, and uses 28 pages to document their rationale.
Factor Two is Overutilization, ... and uses 2 pages to document their rationale.
Factor Three is Disease & Predation, ... and uses 4 pages to document their rationale.
Factor Four is Regulatory Mechanisms, ..and uses 10 pages to document their rationale.
Factor Five is Other Factors, ... and uses 19 pages to document their rationale.

As you can see, the Petition is very heavy on data referencing extensive loss of habitat and host plant availability, but in contrast, only offers a small amount of information to make their claims against farm-reared Monarchs in Factor #2.

The reason Factor #2 is shallow in coverage is because the petitioners do not offer scientific evidence to substantiate their claims. Because the claims are suggested as possibilities, and not facts, they are considered speculative in nature.

Factor #2 of the Petition (Overutilization)

The Petition makes 8 claims in its presumption that butterfly farming and butterfly releases are contributing to the demise and decline of the wild Monarch population. These 8 claims are repeated several times in the Petition, and are listed below:

A. Butterfly Farming can cause the spread of diseases.
B. Farm-reared Monarchs can cause the loss of genetic diversity.
C. Farm-reared Monarchs can cause deleterious genetic adaptations.
D. Harvesting of wild Monarchs exacerbate the wild population decline.
E. Butterfly farms are not regulated: they are not required to follow disease prevention protocols, nor have their stock tested for diseases.
F. Increase in diseases in lab-reared Monarchs coincide with increase of farm-reared butterflies released.
G. Several million farm-reared Monarchs are released each year.
H. The release of farm-reared Monarchs interferes with population studies.

Our Rebuttals of claims listed in Factor #2

A. Diseases

The Petition makes the claim that farm reared Monarchs could transmit diseases, and the release thereof, might negatively impact the wild population. Several citations are offered as supporting documentation, but the articles listed in these citations only ask the question, and / or speculate on the possible risk. No actual proof of this happening is documented.

The most common diseases mentioned in the Petition are Nosema, Cytoplasmic Virus, and the protozoa -- Ophryocystis elektroscirrha commonly known as Oe.

All three of these disease-causing pathogens are easy to avoid, by simply following a "specific disease-prevention protocol." It is not only necessary to have such a protocol for safety sake, but it is impossible to mass rear Monarchs successfully without one.

Instead of speculating that the release of farm-reared Monarchs might negatively impact the wild population by spreading diseases, the question should rather be asked: "is this even possible?"

The answer to such a question is "No," for the following reasons:

First of all, the introduction of insect pathogens into field populations is not an easy thing to accomplish. According to Dr. Kaya, numerous studies have attempted the intentional introduction of insect pathogens into field populations for the purpose of biological control of insect pests. Many of such attempts have failed, demonstrating that such introductions of diseases into the wild population is not easy - especially by small numbers. (Kaya 2001)

Secondly, a butterfly farm can not produce diseased stock on a sustained level. Should a disease, bacterial or viral, enter the colony of an insectory, production in every stage ceases to advance. (Utterback Farms 2010)

And thirdly, Monarch butterfly farmers as a group, are knowledgeable, responsible and careful in how they operate, in order to assure their stock is always healthy, clean, and safe.

In particular, we at Utterback Farms have developed a specific disease-prevention protocol, which we use in our production operation. It is very effective in keeping our stock safe and microbe free, and we follow it religiously.

In addition, we are strong proponents of having our stock periodically tested by a qualified lab, the breeders screened weekly, and documenting the results. Our test results consistently show that our butterflies are free of any disease causing pathogens, as well as any abnormal amounts of bacteria. Further proof of the effectiveness of our protocol and the results of our testing and screening is provided in the "Supporting Scientific Data" section of this document.

B. Genetic Diversity

The Petition proposes that farm-reared Monarchs can be low in genetic diversity and thus possibly augment declines due to inbreeding depression. It is interesting that they make this claim, but at the same time, condemn viable and common means to avoid it.

At Utterback Farms, we go to great efforts and expense to maintain a high genetic diversity in our colony. We are able to accomplish this by the following methods:

1) Our colony starts over with new stock from the wild every year. 2) The breeding pool is kept respectively large. 3) Infusions of stock from the wild are made into the breeding colony several times throughout the season. 4) Relatively few generations are produced per season.

By following these methods, we are able to keep genetic diversity high, and thus avoid inbreeding depression. According to Dr. Bruce Walsh, once the butterflies are released into the wild, any affects of inbreeding are "overturned by a single generation of outcrossing to a larger random-mating population." (Walsh 2001)

C. Deleterious Genetic Adaptations

The Petition claims that the release of farm-reared Monarchs could possibly contribute to the accumulation of deleterious genetic adaptations in the wild population. This proposition is based on an article written by Richard Frankham, which they cite as their source. Unfortunately, the quotes cited from this article, are taken out of context.

R. Frankham did not have Monarch butterfly farms in mind, when he wrote this article. The context of this article is about small colonies of mammals in zoos that had been raised in captivity because their wild population was extinct, or close to extinction.

Because of extinction limitations, these small captive-bred zoo animal colonies were actually larger in size than their related wild population. This availability problem rendering infusions of new stock to avoid inbreeding, practically impossible.

Deleterious genetic adaptations due to inbreeding depression in the scenarios described by Frankham in his article are understandable. However, the limitations faced by the zoo colonies are totally different, and the lack of methods available in the Zoo scenarios, are totally opposite from those available and practiced by our butterfly farm.

Frankham states*: "The extent of adaptation to captivity depends upon selection intensity, genetic diversity, effective population size and number of generations in captivity, as predicted by quantitative genetic theory. Minimizing generations in captivity provides a highly effective means for minimizing genetic adaptation to captivity*…" Later in the article, he also states that *"immigration from the wild into captive populations reduces genetic adaptations in capitivity."*

According to Frankham's statements in the article, one can minimize the affects of genetic adaptations by having small number of generations in captivity, and by the immigration from the wild into captive populations. The very things that Frankham lists as means to minimize adaptations, we are doing.

Notice the differences: the zoo animal colony sizes were relatively small; our breeder pool is relatively large. The zoo animal colonies have selection issues; our breeder pool enjoys random mating. The zoo colony has low genetic diversity; our breeder pool has high genetic diversity. The zoo animal colonies are in captivity 100+ years; our breeder pool starts over each year. The zoo colony has 50+ generations; our breeder pool has 6-7 per season.

Because of these noted differences, Dr. Bruce Walsh has stated that our butterflies would experience little, if any chance of local adaptations, and would be reversed after one generation when being returned to the wild, with absolutely no impact to natural populations.

D. Harvesting Monarchs

The Petition states that the harvesting of wild monarchs by the butterfly release industry, in an attempt to sustain the genetic diversity within farm-reared populations, also has the potential to exacerbate population decline.

First of all, the practice of using Monarchs from the wild population, for breeding purposes in a butterfly farming operation, is one of the requirements mandated by the USDA for obtaining and using a shipping permit.

Secondly, the numbers involved in this practice are minute, when compared to the overall wild population density (i.e. a few hundred compared to millions).

Thirdly, it is only logical, that if the objective is to have farm-reared Monarchs closely resemble the wild population, then the breeding pool should come from the source you want it to resemble.

E. Butterfly Farms are not regulated

The Petition purports that butterfly breeders are not regulated by any State or Federal Agency. This is only partially true, as each State and the USDA do apply some rules, and limitations in regards to their shipping permits.

The Petition goes on to presume that because butterfly breeder operations are not fully regulated by a government agency, that such operations don't do two important things: 1) follow any "specific disease-prevention protocols," 2) nor have any "routine tests conducted on their stock."

I have proven in the above "disease" section, that such presumption is unmerited – at least as far as my own farms is concerned, because we do both of these things systematically. I provide further documentation of this in the "Supporting Scientific Data" section of this document.

F. Diseases in Lab Reared Monarch coincide with butterflies released

The Petition claims that the increase in diseases in their lab reared Monarchs, coincides with the increase in the numbers of butterflies released from butterfly farms. The presumption is, that butterfly farmers are to blame for their lab-reared butterfly diseases.

In reality, what this actually reveals is two things: the people who are conducting the lab- rearing of the Monarchs, are not 1) using a "specific disease-prevention protocol," nor 2) having their breeding stock "tested for possible diseases," by a qualified lab, for the purpose of disease identification, and protocol correction.

G. Millions of Monarchs are released each year

The Petition claims that farm-reared Monarchs can jeopardize the wild population due to the supposed high number of Monarchs released each year. The Petition claims that 11 million butterflies are released each year by the Butterfly Release Industry, several million of which, are Monarchs. These numbers are then compared to the 33.5 million Monarchs estimated to over-winter in Mexico, and less than half a million estimated to over-wintering on the West Coast.

At first glance, these supposed high numbers of released Monarchs, sound significant. But when one examines actual reported numbers, it turns out that these suggested numbers for "released Monarchs," have been grossly exaggerated.

According to a survey done by Tracy Villareal, The actual numbers of released Monarchs in 2014 fell somewhere between 118,230 and 193,204. As you can see, this is far less than "several million" claimed by the petition. For further documentation, please refer to the "Supporting Scientific Data" section of this document.

H. Releasing farm-reared Monarchs interferes with population studies

The Petition claims that the "Release of farm-reared butterflies can also interfere with studies of the distribution and movement of wild butterflies which are essential to understanding their conservation needs."

This is clearly an assumption, and no scientific support is supplied, nor inferred. It is not possible to know if this statement is true, without adequate documentation from substantial study results. To my knowledge, no such studies have been done.

In the same section of the Petition (Overutilization), the petitioners suggest that it should be allowed for individuals and teachers (citizen scientists) to rear and release Monarchs. Since the petitioners condemn taking Monarchs from the wild for breeder purposes, and also say that their own attempts at rearing Monarchs in a Laboratory have been unsuccessful without contracting a disease, this then dictates the need to ask three important questions:

1. Where is the stock going to come from, that these "Citizen Scientists" are to use for rearing?
2. Are we to believe that the stock reared by inexperienced citizens is going to be more safe for releasing, than stock reared by experienced breeding facilities?
3. If the release of farm-reared Monarchs are supposedly "interfering with distribution studies," how are Monarchs raised and released by inexperienced citizens exempt from this 'interference?"

Dr. David James of Washington State University uses Monarchs raised by inmates at Walla Walla Penitentiary for tagging and releasing studies, which are released in Washington state. (Garvey, K. K. 2014). The same questions, therefore apply:

1. Are Monarchs raised by inmates at a penitentiary more safe for releasing into the wild, than those raised by experienced breeding facilities?
2. If Monarchs, "captive-bred" by inmates at a penitentiary, are used for tagging

and releasing studies, then why wouldn't farm-reared butterflies from an experienced breeding facility be equally viable for such studies?

3. If releasing tagged Monarchs does not "interfere" with conservation studies, then why couldn't farm-reared monarchs be tagged in order to avoid this interference?

I. Summary

The Petition lists five threats to the Monarch, which are listed as "Factors." For the most part, the Petition as a whole, contains substantial documentation. Factor #2, however, does not.

Factor #2 (Overutilization) makes 8 claims, but the claims are not supported by scientific data. The Petition does list several citations for Factor #2, but these citations are mostly articles that were written by themselves. These articles are simply expressing the same claims made in the Petition. That would be ok if the articles were accompanied by documented evidence, but they are not. Postulation alone is not evidence and should not be considered as such.

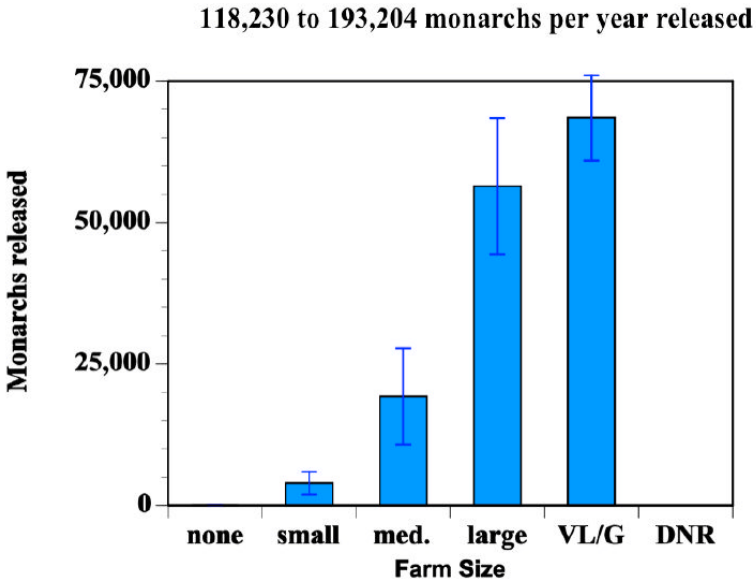
It is ok to ask important questions and express concerns, but science demands proof in order to become factual. Blanket statements have been made that encompass the Butterfly Release Industry as a whole, but such absolute condemnation is inaccurate and unwarranted when it come to individual farms such as ours, who operate safely and responsibly.

We have demonstrated in our rebuttal, that the claims made in Factor #2 are unsupported by scientific evidence. We, on the other hand, will provide evidence that shows we are not guilty of the claims made in Factor #2, and will provide the necessary documentation in the following section entitled "Supporting Scientific Data."

Supporting Scientific Data

A. Reported and Documented Release Numbers

In response to the Petition's claim that several million Monarchs are released each year, a survey was conducted by Tracy Villareal in order to determine the actual numbers. The following data is derived from 59 butterfly farms. (Villareal 2014)



The actual numbers of released Monarchs in 2014 fell somewhere between 118,230 and 193,204. If you use the average number of 155,717 and use 75% of that for the East Coast, and 25% for the West Coast, the actual release numbers would look more like this: roughly 116,787 released on the East Coast, and 38,929 released on the West Coast.

Considering that the butterfly release season is seven months, the monthly results are thus: ~16,683 released per month in the East; ~5,561 released per month in the West.

If these numbers are then compared to their perspective over-wintering numbers, the results are thus: .04% released per month in the East, and 1.1% released per month in the West.

As you can see, the number of released Monarchs is not several million per year, but actually about 1/20th of that. The reality is, the actual numbers released are not significant at all.

B. Scientific Data Particular to Utterback Farms

1. What are we doing to assure that our stock is healthy and safe?

Utterback Farms has been raising Monarch Butterflies for 20 years. It is impossible to be in this business that long, producing faithfully and reliably week after week during each season, unless we are doing everything safely and correctly.

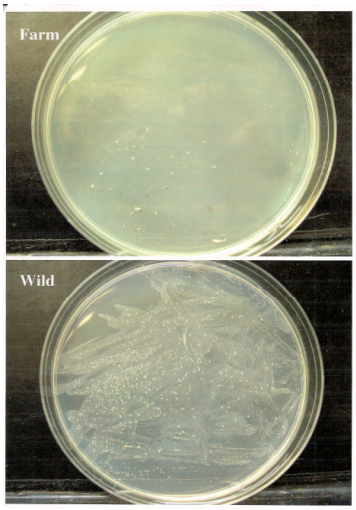
Disease avoidance

We spend thousands of dollars every week to keep our production facility operating safely. We sterilize our laboratories and equipment every day. We use the latest in technology in all of our labs, and a protocol that keeps us microbe free.

We also have our butterflies periodically tested at a qualified lab to verify their health. The tests consistently show the following results: *"All the insects were negative for protozoan spores, including OE, as well as any occluded virus particles. No pathogenic bacteria were detected."*

Please note an example of our Lab Test Results, below:

Microbial Agar Dish
Showing bacterial growth from tissue samples both Farm and Wild Monarch samples

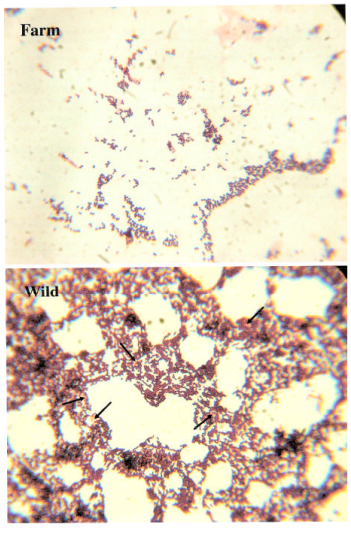


Lab Report Notes:

"There was a very small amount of bacterial growth on the microbial agar dish from the 'farm' butterfly, and gram-staining showed the bacterium to be gram-positive coccus. The agar dish from the 'wild' butterfly had more bacterium growth as well as the appearance of a second type of colony morphology."

"Gram-staining showed the same type of gram-positive coccus bacterium as well as a small gram-negative bacterium cell."

Gram Stains,
taken from bacterial growth on the previous Microbial Agar Dishes



Lab Report Notes:

"Both stains show the gram-positive (purple/dark) round coccus bacterial cells. The arrows in the 'wild' photo are indicating some of the gram-negative (pink/light) cells present in the culture."

"Even after an additional 24 hours of growth, the 'farm' dish still had only a small amount of growth, but the 'wild' dish increased even more."

Comments:
"There was a big difference in size and condition of the farm and wild insects."

Oe avoidance

Our breeding stock is kept clean and free of any Oe spores, by way of sterilizing the eggs, and screening the breeder replacements. We also feed our caterpillars all they can eat of our homegrown host plants, which are very well maintained.

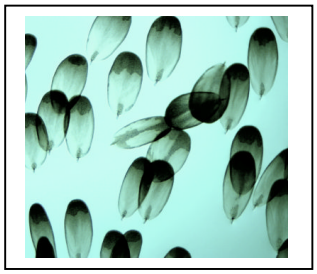
We have found that to have healthy stock, you must start with healthy, pest free host plants. We spend much time, effort, and expense in growing the healthiest and most nutritious milkweed plants possible. As an additional measure against the introduction of Oe, we clean and sterilize our milkweed plants before feeding.

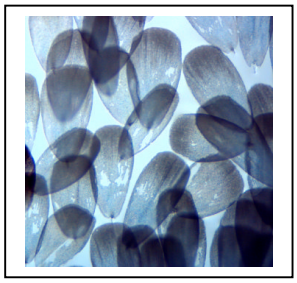
To maintain an ongoing vigilance against Oe, we take a slide sample of our stock every week. The slide samples allow us to see if any Oe spores are present. We started archiving those slides three years ago, in order to maintain documented proof of our healthy stock.

Since the avoidance of Oe is a relatively easy thing to accomplish, we have never had an Oe problem at our facility. We now have three years of archived slides that can easily prove, that we are 100% Oe free, week after week, year after year.

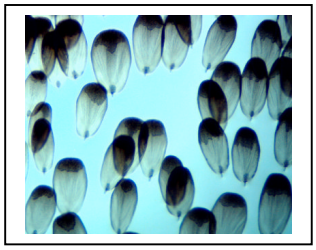
Please note the images of Monarch abdomen scales below. I have provided images of our slide samples, for the beginning, middle, and end of the season for the last three years. As you can see, the scales are 100% clean of any Oe spores:

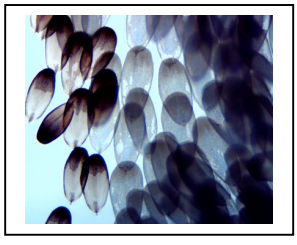
April -- 2012



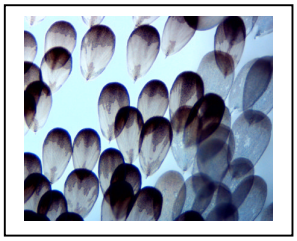
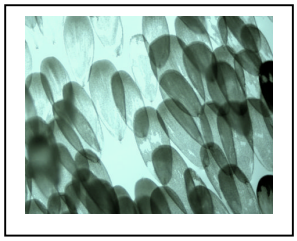


June -- 2012





Sept. -- 2012

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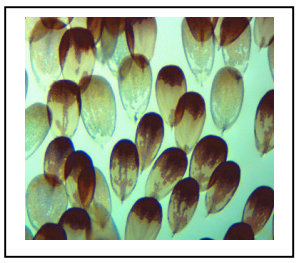
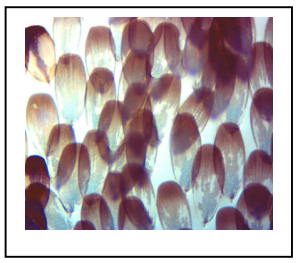
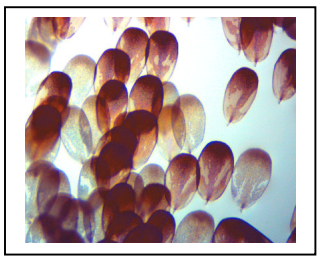

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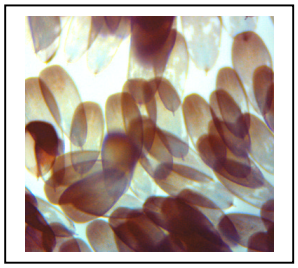
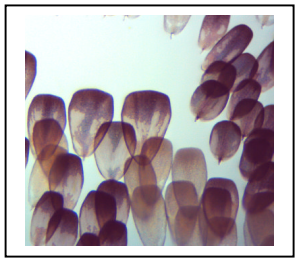
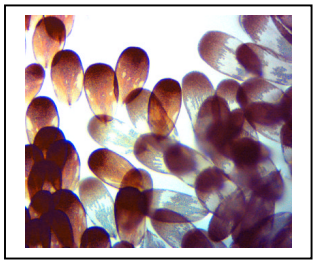

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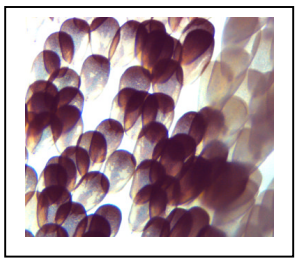
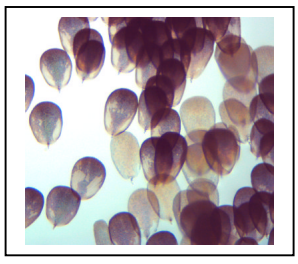
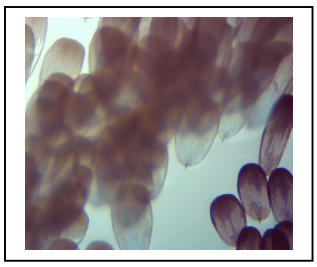

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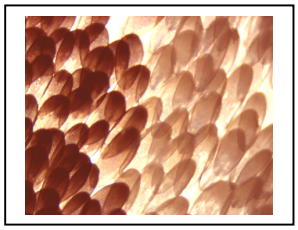
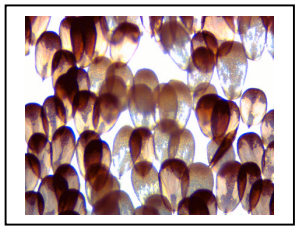
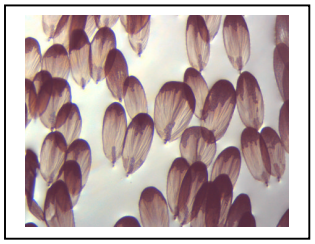
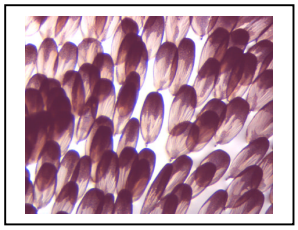
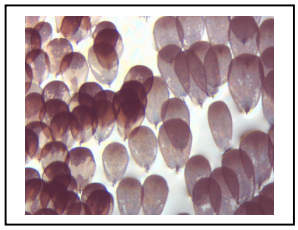
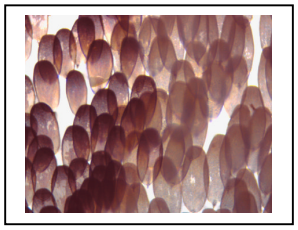
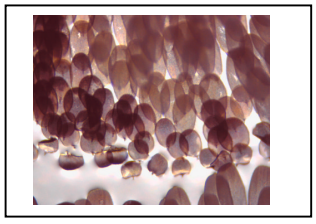




June -- 2014


Sept. -- 2014


2. What are we doing to maintain a healthy breeder pool?

In order to have healthy and vibrant stock, you must have a carefully selected and properly maintained breeder pool. At Utterback Farms, we are very careful with our breeder pool, and go to great effort and expense to maintain a high genetic diversity in our colony. We are able to accomplish this by the following methods:

1) Our colony starts over with new stock from the wild every year. 2) The breeding pool is kept respectively large. 3) Infusions of stock from the wild are made into the breeding colony several times throughout the season. 4) Relatively few generations are produced per season.

Evidence Demanding Further Studies

A. Evidence that our farm-reared butterflies are helping the wild population

1. Testing for impact on the wild population

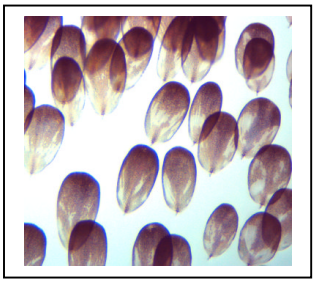
We have done some testing this year and last, to see what kind of impact our clean, healthy stock would have on the wild population. We have allowed some of our stock to mate with wild Monarch butterflies. We allowed this to happen in some of your greenhouses, so that we could take slide samples of the F1 generation in order to test for Oe, and also send samples to a qualified Lab to test for disease causing pathogens.

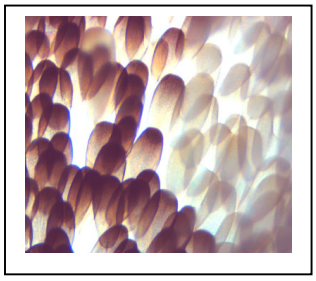
Oe test results

We were pleased to find that all of the outdoor F1 generation was 100% free of Oe. This was verified by both our slide samples, and the Lab Test results. Even the resident wild butterflies themselves, caught outside our greenhouses are beginning to be nearly free of Oe. This is a good trend!

I have provided some slide samples below, in order to provide evidence of this positive impact of the F1 generation. (Samples taken in 2014 showed similar results)

Sept., 2013





Lab test results

The lab tests also verified that both indoor and outdoor samples were free of any disease causing pathogens.

2. Farm reared butterflies are strong and hardy

One of the reasons our butterflies at Utterback Farms are large, healthy, and hardy is due to the quality milkweed we feed the caterpillars. We grow two varieties of milkweed. We have a sub-tropical variety in our greenhouses -- Asclepias Curassavica, and we have a native variety planted outside in our orchard – Asclepias Speciosa.

Asclepias Curassavica

Asclepias Speciosa

size comparisons

We generally begin the season with Curassavica, and then switch over to feeding the Speciosa around June for about six weeks, and then switch back to Curassavica. We have noticed that when we switch from Curassavica to Speciosa, the size of the chrysalides, and butterflies become subsequently smaller.

Size comparisons of Chrysalides and Butterflies. Those fed on Curassavica on left side of each picture, and Speciosa on the right.

More cold tolerant

We have also done some cold-tolerance tests, whereby we placed some butterflies in the refrigerator at 50 degrees Fahrenheit for 12 hours periods. We have found that butterflies fed on Curassavica did not show any signs of intolerance to the 12-hour period of cold temperatures. Those that had been fed on Speciosa, however, did show some signs of intolerance to the 12-hour period of cold temperature.

Speciosa decreases in quality during the latter part of the season

We have observed that Speciosa begins to decrease in quality around August. By September, the leaves have become very “leathery” and unpalatable. By the end of September, the entire plants have died back to their winter dormancy state.

This is happening when wild butterflies are in the midst of the last generation life cycle before migration. This can only diminish the ability of the wild butterflies to be strong, when they need to be their strongest.

Our farm-reared butterflies are just as strong and hardy at the end of the season as they are at the beginning. Our season ends at last week of October, and most of the butterflies we produce at that time are going to butterfly exhibits. So more than likely, not too many of our butterflies would actually be a part of the fall migration, but we have observed that our butterflies are larger and more hardy than those in the wild.

A Professor at UC Davis, (L.H. Yang), is using our stock to study the affects of climate change on milkweed, and the resulting affects on the Monarch. He has made similar observations as we have, regarding the diminishing quality of Speciosa toward the end of each summer. By virtue of the fact that he is a signer of the Petition, yet trusts the quality of our butterflies to yield trustworthy results for his studies, should speak volumes as to the legitimacy of our farm to produce quality stock.

B. Summary

We believe that our farm-reared butterflies are not only safe to release into the wild, we conclude that our butterflies are actually helping the wild population. Our butterflies are large, strong and healthy. That should be seen as a benefit for repopulating, not as a possible risk.

The evidence that we have provided above should serve as a stimulus for more research. We have noticed that wild butterflies in the vicinity of our farm, are trending to have less Oe, because of our Oe-free farm-reared butterflies. We have discovered that some milkweed species can produce better cold-tolerant butterflies than others. We have observed that some milkweed species produce hardier butterflies than others.

We acknowledge these observations are somewhat elementary in their progressive scope, and are therefore, not yet conclusive. But these observations do provide interesting results. This is evidence that demands further study.

Supporting Commercial Information

The Monarch butterflies raised at Utterback Farms are used in many wonderful ways. They are used for release at weddings, funerals and memorials, and at numerous types of special events. In addition, our butterflies are used for education. We supply a variety of butterfly exhibits at zoos, county and state fairs, and even butterfly exhibits at other farms open for tours to the public.

Our butterflies are enjoyed and admired by thousands of people annually, and we have spent hundreds of thousands of dollars over the years, to make this possible.

Sample accolades from some of our wholesale and retail customers

“I wanted to let you know that this year’s breeding season was a total success, and it had a lot to do with your great, prime healthy stock. I can always count on your stock giving us good results that lasts the entire season – thanks for being there.” Dave

“Just finished transferring today's butterflies and just wanted to let you know what I've been seeing week after week of beautiful quality. Whatever you are doing, you are doing a splendid job! These butterflies look great – as usual! May God continue to bless your endeavors.” Jake

“Just a note to tell you that we are having a banner year with Monarchs...thanks to your healthy starts you provided us in May and June. I think we have 400 flying in our new 48-foot flight room. I just wanted to tell you how much we appreciate you and your care with butterflies.” Carol

“I just wanted to thank you again for your amazing generosity! Three friends and I taught a second grade class about life cycles, and they were so excited to see a real live egg(s) (just hatching today!), caterpillar, chrysalis, and adult butterfly! They named the adult butterfly Vladmir and were excited to see him fly away at the end of our lesson. Thank you again so much for helping me make a difference in these kids' lives!” Kara

“ Once again, the most beautiful part of the evening's event's...thank you so much John! Attached are a few special photos...If you knew the story behind each one it would make you cry and smile all at the same time.” Laurie

(This was at a “Butterfly Release Benefit” for a Children’s Hospital for burned victims)

Final Conclusion

A Petition has been filed requesting that the Monarch Butterfly be protected under the Endangers Species Act. Five Threat Factors were listed as rationale for this listing. Factor #2 purports that farm-reared Monarch Butterflies, after being released, may put the wild population at risk. The purpose of our document has been to rebut each of the claims listed in Factor #2. In our rebuttal, we have adequately and accurately refuted each of the claims listed.

The USFW is responsible for the evaluation of the Petition, and its subsequent request to have the Monarch butterfly listed as a threatened species. This is going to require a tremendous amount of consideration. We want to thank the USFW for their willingness to shoulder such an imposing task.

If the Monarch butterfly is indeed threatened, then we as a Monarch butterfly farm, would like to assist any way we can to reverse that trend. One way we can help is to continue rearing Monarch butterflies for release.

We strongly assert that our butterflies are having a positive impact on the wild population, by promoting good health, and reducing the level of Oe wherever they are released. We believe that “releasing” butterflies can actually be viewed as a repopulating effort.

In order to verify that farm-reared butterflies are safe for releasing, we personally believe that each butterfly farm should have their stock periodically tested by a qualified lab, and should screen their breeder replacements weekly. We also believe that the results of these tests should be made available to the Permitting Authorities.

However, since we cannot speak for other farms and can only speak for ourselves, we shall submit a request for exemptions, which would be specific for our farm, based on our documented performance.

Requests for Exemptions

We maintain that we have adequately demonstrated that rearing, shipping and releasing Monarch butterflies can be done safely and beneficially. We therefore, assert that we qualify for the following exemptions, and formally submit these for Utterback Farms:

1. **Exemption Request #1 -- Permit to obtain Monarch butterflies from the wild, for breeding purposes.**

We are presently allowed to obtain Monarch butterflies from the wild, in accordance with our Federal (USDA) and State (California) permits. We would need these permit allowances in order to continue in operation.

2. **Exemption Request #2 -- Permit to allow farm-rearing of Monarch butterflies**

We are presently allowed to rear Monarch butterflies on our butterfly farm, in accordance with our Federal (USDA) and State (California) permits. We would need these permit allowances in order to continue in operation.

3. **Exemption Request #3 -- Permit for Interstate, or Intrastate Commerce**

We are presently allowed to sell, and ship Monarch butterflies for release purposes in the permitted Western States of California, Arizona, Nevada, Washington, Wyoming, Idaho, Utah, Colorado, and New Mexico, in accordance with our Federal (USDA) and State (California) permits. We would like to be able to continue with this Interstate commerce.

However, if that is not possible, then we would like to request an exemption for Intrastate Commerce within our home state of California, which is also the source-state for our Monarchs.

This exemption request is accordance with allowance listed in the paragraph entitled: "Intrastate Commerce," under the heading "What situations are exempt from the prohibitions of the ESA?," of the USFW / ESA website, found here: http://www.fws.gov/ENDANGERED/permits/faq.html

4. **Exemption Request #4 -- Permit to rear and sell Monarch butterflies for releasing and repopulating purposes**

We are presently allowed to sell, and ship Monarch butterflies for release purposes in accordance with our Federal (USDA) and State (California) permits. We would like to be able to continue to sell and ship butterflies for ceremonial release purposes, which can also serve as a repopulating benefit.

5. **Exemption Request #5 -- Permit to rear and sell Monarch butterflies for Educational purposes**

We are presently allowed to sell, and ship Monarch butterflies for educational purposes in accordance with our Federal (USDA) and State (California) permits. We would like to be able to continue to sell and ship butterflies to butterfly exhibits at zoos, county and state fairs, and at farm exhibits.

These exhibits serve as effective teaching and learning opportunities for children and adults alike.

6. **Exemption Request #6 -- Permit to rear and sell Monarch butterflies for Scientific Research and Conservation Studies.**

We are presently providing Monarch eggs to a Professor at UC Davis University, for his Monarch and milkweed related studies. This is just one example of how our stock is already being used for research purposes.

Our facility could be used for all kinds of research and conservation studies, such as tagging and release studies, and various types of milkweed studies. We could conduct studies at our farm, or we could provide stock for studies being performed elsewhere.

Citations

1. Kaya, H. K. 2001. Scientific Information Presented by International Butterfly Breeders Association, section 2, item 7). Also available from: http://butterflybreeders.org/public/expertanswers.html

2. Utterback Farms, 2010. Does releasing farm-reared butterflies spread diseases? Available from: http://www.utterbackfarms.com/environmental.php

3. Walsh, B. 2001. Scientific Information Presented by International Butterfly Breeders Association, section 2, item 6. Also available from: http://butterflybreeders.org/public/expertanswers.html

4. Frankham, R. 2008. Genetic adaptation to captivity in species conservation programs. Molecular Ecology 17(1): 325-333.

5. Garvey, K. K. 2014. Have you seen me? A tagged Monarch? Available from: http://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=15624

6. Villareal, T. A., 2014. An assessment of the size of the butterfly release industry in 2014. Available from: http://www.butterflybreeders.org/files/release_survey/release_numbers3.pdf

Brief Bio of John Utterback, owner and operator of Utterback Farms, Inc.

- Raised on a 400 acre Farm in New Mexico.
- BS degree in Agriculture from NMSU, majoring in Wildlife Management.
- 10 yrs. in Conservation work - for 3 different Govt. agencies (in USDI and USDA).
- 13 yrs. In Aviation as a Missionary Pilot in Africa, and for an Airline Stateside.
- 20 yrs. experience as a Butterfly Farmer.

Insect Rearing Courses

"Principles and Procedures for Rearing Quality Insects," Dept. of Entomology and Plant Pathology, Mississippi State University, Spring 2004