



*Hard to Find Dinner this Year!*

## **MSPA Official Newsletter**

**Winter 2019**

Thanks to the efforts of our knowledgeable members this issue is again full of great articles and information about the pigeon hobby. If you have an idea for the newsletter or would like to contribute an article, please contact me at [Pigeonprekker@hotmail.com](mailto:Pigeonprekker@hotmail.com) I would welcome your input.

### **The Electronic Newsletter Reminder!**

Due to the cost of postage and printing a high-quality newsletter, the MSPA Board of Directors has decided to make the quarterly newsletter available on the MSPA web site at <http://www.minnesotastatepigeonassociation.com>, under the Member Section tab. If you are a member that doesn't have internet access, you can view the newsletter at your local library or request a mailed copy at: **MSPA Newsletter, 21500 201<sup>st</sup> Street NW, Big Lake, MN 55309** or call (612)889-2945. For the time being no password is necessary to view the "Membership Section" of the web site. An archive of past newsletters will also be available on the MSPA web site. The Newsletter can be downloaded or printed from the web site if the member desires a hard copy. **If you have already notified me of your desire to receive the Newsletter via conventional mail, there is no need to notify me again, I will mail your copy!**

***IF YOUR E-MAIL ADDRESS CHANGES PLEASE NOTIFY US!***



## **Officers' Reports**

### **A Message from our President**

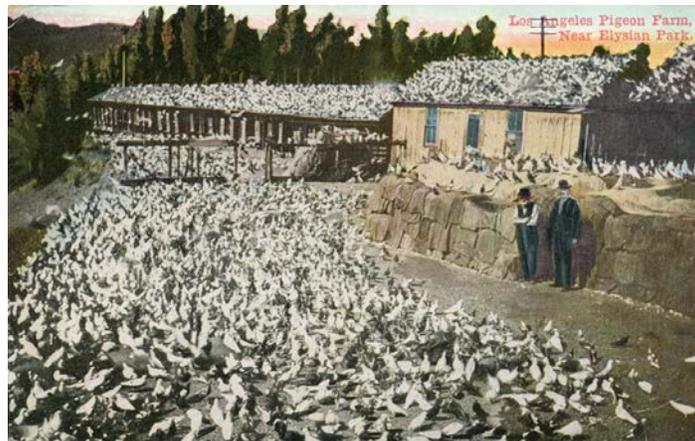
**Submitted by - Paul Lepinski**

I hope that this newsletter finds all of you in good health. Another North Star Classic has come and gone, I thought it was a successful show. I received a few phone calls and e-mails pertaining to the loss of birds after the North Star Classic of which most were young birds. I personally thank those individuals that pulled their entries prior to the show with concern of possibly have problems with their birds. After looking over the birds throughout the show hall and talking to exhibitors no one complained about any birds in the show hall including the for-sale birds. However, there were several individuals that lost birds. I personally know of two people that had birds sent in with the results being a virus. It is very puzzling some individuals had birds entered throughout the show hall and had no problems.

Also, the MSPA held our annual Potluck meeting and several topics were brought up, discussed and voted on. The first swap will be on 30 March 2019 held at the McLeod county fairgrounds, Hutchinson, Minnesota. Please get the word out and please come visit and attend the swap and meeting. It was also decided that we would have a combined Summer Picnic with the Brown County Pigeons and Poultry Association, in which they agreed. I will be in contact with the BCPPA to coordinate with them. Hopefully with this effort we can promote both clubs at the swaps and the shows.

On another note as the District Director for the NPA one of the motions to have a promotional poster made was approved several months ago and is in the final phase of being completed. I have a sneak preview of it to share with you. Please see page 7 of this Newsletter. As soon as they become available, I will have some to pass out.

Hopefully, we will see many of you at the MSPA SWAP; your input is important to the BOD's and attendance at the swap helps support the hobby plus helps us pay the bills. See you soon.



*Just a couple of pair you said! We'll keep it small you said!*

## **1<sup>st</sup> Vice President's Message**

**Submitted by - Tim Kvidera**

After being spoiled in December, Mother Nature decided to remind us what winter is supposed to be like in Minnesota in January and February. It is hard to think about pairing up birds when it is too cold in the loft to do anything but feed and water them as fast as possible daily. No time to stand and watch, let alone pick up and examine the birds to figure out who would make the more promising pairs. But assuming one keeps decent records, and have an inventory of what is in the loft, much can be done in the warmth of the house. Pairing can be done on paper in anticipation of doing it for real in the loft.

For a variety of reasons, the last show I made this season was the North Star Classic. Had intended to do Des Moines, Myrtle Beach (NPA National) and New Ulm, but they were not in the cards I was dealt this time around. Sounds like all were nice shows.

We have our spring MSPA swap coming up March 30th at the Hutchinson fairgrounds. If you have extra birds, or are in need of some mates for what you do have, stop on in and check out what is there and who needs what. Even if you do not have either these needs, come anyway and visit with old friends and make new ones. I am sure there are plenty of stories to share. Hope to see you there.

## **Minutes of MSPA Executive Board Meeting**

**Saturday January 5<sup>th</sup>, 2019**

**Submitted by- Club Secretary Kathyne Rhode**

### **Called to Order**

**Secretary's Minutes:** Read and approved.

**President Report:** The show went well. There were some reports of illness with deaths 10-12 days after the show. Some breeders, who had birds scattered throughout the show hall had no deaths. The North Star Classic was right after the National Young Bird Show in Louisville. A few people were already having issues and some breeders were pulling birds due to illness before the North Star show. Paul will be making proposals to NPA to study pigeon health.

**1<sup>st</sup> Vice President's Report:** Tim Kvidera reported that he did not lose any show birds. He did lose some young birds not related to the North Star Classic.

**2<sup>nd</sup> Vice Presidents Report:** Maybe we should produce a video and see if we can find the cause of the illness spreading. The English Trumpeter club is thinking of possibly coming to the North Star Classic

**The Treasurer's Report:** Read and approved.

### **Old Business**

It was proposed that a new jack be put on the latest cooping trailer, Paul said he can fix it but needs assistance. A motion was made and seconded to buy and install a new jack. The motion was voted on and approved.

### **New Business**

The MSPA Swap date was determined and scheduled for March 30, 2019.

Paul will check with the Brown County Poultry Association to see about joining us for our summer picnics.

It is possible that there will be a fall swap at Houles on Sept 28, 2019.

The 2019 North Star Classic will be the 2<sup>nd</sup> Saturday in November. The show hall will be reserved for November 8<sup>th</sup> and 9<sup>th</sup>.

Bruce brought up the possibility of moving the board meeting location. It was voted by the membership to keep at a centralized location.

An Adeno virus update was given. A handout was provided on the virus. That handout will be in the Winter 2019 MSPA Newsletter.

### **Membership Dues:**

The MSPA Board of Directors received a breakdown of the costs for printing and mailing of the newsletter. The club is printing about 40 copies. Each issue cost approximately \$4.50 or \$18 a year to print and mail. Dues are currently \$10 a year. The suggestion has been made to increase dues for those who want to keep receiving a hard copy of the MSPA newsletter. A general small dues increase may be proposed as well.

Bruce added that maybe we should consider adding a Senior and Junior membership option.

Mike Daily does not think we should increase dues.

Kim Bartz agreed, for everyone receiving the Newsletter electronically, but the club should offer the ability to pay extra for a printed copy.

Motion by Kim Bartz- That for those receiving the online newsletter it will be at no additional cost. If you want to get a hard copy, there will be an additional fee to cover the cost of postage and printing. This change will go into effect for January 2020. The motion was seconded Mike Daily. The motion Passed.

### **Lifetime Membership:**

Historically MSPA has given Lifetime membership to certain members. A proposal was presented by Rick Beesman not to touch the dues for a lifetime membership, but the lifetime achievement award recipients would be subject to the dues changes.

Tim Kvidera agreed to create specific guidelines for the lifetime achievement award. He will also create specific guidelines for the President's Award.

A motion was made and seconded and the meeting was adjourned.

**MSPA Treasurer's Report  
Executive Summary current through February 17, 2019**

**Respectfully submitted by - Patti Dietzel, Treasurer**

**Account Information Minnesota State Pigeon Association Trust Checking & Savings Accounts**

**Business Checking: Starting Balance February 17, 2019: \$1,590.88**

**Pending and Withdrawals/ Debits: (\$100.88)**

Detail:

Building Rental for Jan. meeting: \$85

Paper products for Jan. meeting: \$11.88

Rebate check: \$4.00

**Total Withdrawals: (\$100.88)**

**Pending and Deposits/Credits: \$40.00**

Detail:

Membership dues: \$40.00

**Total Deposits: \$40.00**

**Available Checking Balance February 17, 2019: \$1,530.00**

**Business Savings: Starting Balance February 17, 2019: \$592.26**

**Pending Withdrawals/ Debits: (\$0.00)**

**Available Savings Balance February 17, 2019: \$592.26**

**Total Combined Available Balance February 17, 2019: \$2,122.26**



# Here is the Poop on MSPA Upcoming Events



## MSPA SPRING SWAP

MARK YOUR  
CALENDAR!

The MSPA Pigeon SWAP  
Saturday March 30, 2019  
McLeod County Fairgrounds  
840 Century Ave SW  
Hutchinson, MN 55350



### Pigeon Pictures of the Past We are Part of an Old Hobby!



*16<sup>th</sup> Century French Pigeon Barn*



*The dovecot in Eglinton Country Park  
Irvine, North Ayrshire, Scotland 1400s.*

## Adeno-coli Syndrome

There are a number of diseases during the season that are a serious threat to the health of the birds.

We are referring here to the Adeno-coli syndrome and the Ornithosis complex.

### Adeno-coli Syndrome

In this "syndrome" two pathogens are of interest. The first is the Adenovirus and second the E. coli bacterium.

We refer, when we talk about this syndrome, on the disease that occurs especially in young birds, about a year old. Older birds are hardly affected by this disease. The clinical signs occur when the youngsters are exposed to stress conditions. But also under other stressful conditions such as overcrowding in the cages, etc. outbreaks can occur.

The symptoms are well known. Excessive drinking, poor appetite, vomiting and watery diarrhea are the most obvious symptoms. The condition is rapidly getting worse and there is weight loss. The disease spreads rapidly in a loft. Within 48 hours, all the young birds are sick. A pure infection of this type of so-called *Classic* adenovirus birds will recover within a week. If no complicating conditions come into play. One can think in particular of the E. coli bacteria.

And since that is very often the case therefore often is spoken about the so-called Adeno-Coli Syndrome.

Precisely because contamination with E. Coli occurs the disease rapidly aggravates and weakens the birds quickly, they lose weight and get a green foul-smelling dropping. Even death can occur due to the complications caused by the E. coli bacteria.

In severe cases of adenovirus infection, the birds also die as a result of the weakening and damage to the liver. The pigeons with severe damage to the liver usually heal slowly from the Adenovirus. Due to the backlog of flying experience and fitness, the flight performance after recovery is often disappointing.

The adenovirus of the so-called Classical adenovirus causes catarrhal enteritis. The virus penetrates the intestinal cells and damages the intestinal wall. The intestinal wall leaks. These are a good breeding ground for bacteria normally present in the intestine, such as E. Coli. This increases the damage to the intestinal wall. And death often occurs due to the complications caused by these bacteria (blood poisoning).

If there are not any complicating factors than the pigeons recover of Adenovirus infection in a good week.

But what we see in practice is a wide variation in severity of symptoms. A limited number of cases will recover within a week and the damage is not too bad. Complication occurs with the E. Coli bacteria the disease processes much more severe and recovery is much slower.

The chances of a Coliform bacteria can cause worsening symptoms again depends on the resistance of the youngsters. Did they also suffer from such an infection with cancer, or

Hexamitiasis or Ornithosis, the disease merely expires dramatic.

The Adeno-Coli Syndrome is truly a 'multifactor-disease ".

Other debilitating diseases such as Hexamitiasis, and cancer, stress factors such as basketing, overcrowded pens etc. all play a significant role in the severity of the disease. It is clear that our attention to the youngsters should focus on optimal maintenance of the resistance of the animals.

The diagnosis is based on clinical signs and the age at which symptoms occur and mainly to the seasonal nature, usually with high certainty. Yet with these phenomena one should also be thinking of diseases as Paramyxovirus infection, herpes infection, Streptococcosis, Hexamitiasis, and Salmonellosis. Certainty that one has to do with the Adenovirus is obtained true checking for embedding cells in the liver and intestinal mucosa.

In the fight against the disease one cannot use a preventative vaccination. The adenovirus in pigeons belongs to a different circuit from the Adenovirus used to control the EDS in chickens. This vaccine has been used frequently in pigeons. Our experience is that single inoculation with this vaccine gives no result in the fight against Adenovirus in pigeons.

In Belgian publications mention results with this vaccine if the youngsters were vaccinated several times in succession with this vaccine.

We could not confirm this yet.

As we know, there are no effective drugs against viral infections. This means that the alleviation should therefore primarily focus on addressing the secondary bacterial infections, the loft hygiene and stress prevention and increasing the resistance of the youngsters.

### **Control secondary bacterial infections:**

With the adenoviruses coli complex we have mainly to do with E.coli in the secondary bacterial infections. This bacterium occurs in about 97% of the intestines of pigeons. The bacteria can be considered more or less as normal intestinal inhabitant. However, due to the changes caused by the Adeno virus infection in the intestine the bacteria can suddenly multiply. The toxins that this bacterium produces can damage the intestine through the intestinal wall and pass through a blood poisoning. At that stage, usually no help is to offer to the pigeon. Most do not survive this stage.

It is therefore essential that the strong multiplication of coli bacteria is prevented. Some agents have a reasonable effect. Baytril (Enrofloxacin) works well but does not deserve preference because of the impact this has on bone growth.

In some cases, it may be useful to contain the E. coli population by providing a cure after spawning. Under these circumstances, the stress sometimes causes a stronger increase in the occurrence of coli bacteria. Especially when there is overcrowding.

But it should be considered to take preventive measures. Indeed, it is preferable not to use antibiotics excessively. The good bacteria also suffer.

**Loft Hygiene:**

Hygiene is always important.

Of course, it is important to ensure that no diffusion occurs through drinking pots and bowls. As far as that hygiene is not enough. However, excessive hygiene, on the other hand, may lead to youngsters with too few "teething problems" making sufficient and acquire immunity to diseases difficult.

In practice this will not happen so easily. My experience is that the average pigeon fancier knows what he / she is doing.

**Prevention of stress:**

This is obviously very important. Stress is often the "trigger" that causes latent (hidden) infections manifest themselves.

Of course not all stress is to avoid. The youngsters will be basketed anyhow.

But stress that occurs due to overcrowding is usually to avoid. Besides being stressful, it often causes an outbreak of E.coli infection in a loft.

Stress in itself reduces the resistance. Reduced resistance increases the risk of infection.

Drug treatment may be necessary. But this can also cause deterioration of the condition, so one can end up in a circle.

**Increase the natural resistance:**

I believe that this should be the base for addressing this problem. Indeed, the use of drugs should be considered as a necessary evil.

Hygiene is not negligible, and the other hand is not too extreme one already contributes to an increase in resistance by decreasing the infection pressure. If we also avoid stress so the pigeon is also more likely to increase its resistance.

Making sure that the intestinal flora of (young) birds increase, one stimulates the resistance as shown again and again. By improving the intestinal flora, the harmful intestinal bacteria get less opportunity to multiply explosively. Since in this case the Coli bacterium has less chance to multiply, the youngsters quickly recover of this infection.

This method works very limited if the infection has struck in full.

In these cases, usually one is forced to resort to drugs such as previously mentioned.

For a good general resistance it is important for the pigeon to have a good digestion. If one can ensure that the birds maintain a good intestinal flora, one is on the right track. It's obviously that a pigeon with a good intestinal flora will never be ill. But the fact is that these birds because of their better resistance more easily can overcome the infections.

A pigeon with a healthy intestinal flora has a better feed utilization. The vitamin metabolism is better. The uptake of nutrients will be facilitated. In short, the bird can easily get in shape. And lately, it is more and more clear that a healthy intestinal flora makes a contribution to a difficult development of harmful bacteria.

In this way, infections with these bacteria are generally less serious.

By souring the drinking water of the pigeons with sour apple vinegar, phyto-vitality, Herba etc. makes it easier for the good gut bacteria to multiply.

This way you can make a valuable contribution to a healthy intestinal flora.

One must be careful that the acidity is not so low that even the good gut bacteria have difficulty to get to develop well.

The tests we did last year with the improved version of the Phyto-vitality showed that this natural approach can actually help improve the condition of the pigeons and the rising of the form.

Our phyto-vitality is being used for many years by many fanciers. A small two years ago we started with a number of experiments in which we added five resistance enhancing herbs to our phyto-vitality. And also, we added the famous ginseng. This root has a stimulating effect on the body.

About vitamins and resistance has already been written a lot. I would like to provide a question mark behind the old saying that a dove absorbs enough vitamins from his food. I of course agree that a pigeon under normal circumstances absorbs enough vitamins and nutrients from a good diet may include good health.

But here's the rub as well. Indeed, pigeon racing is sport. And that requires more from the body than under normal circumstances. The chain of health and resistance is as strong as its weakest link. One can give the best possible care if a relative or absolute shortage of essential building blocks exists the health will collapse as a house build of cards.

My opinion is that once more is demanded of the pigeons they will be better off if they regularly get a good vitamin preparation administered. That can be either on the food or by drinking water. This extra vitamin-gift optimizes the enzyme systems in the body. Farvisol has proved its value in practice. This is a vitamin preparation containing high levels of vitamins and trace elements.

**Some rules for a good resistance and a good base for getting them in a good shape.**

1. Avoid stress. Important in this is to prevent overcrowding.
2. Through a good basic hygiene ensure that the infection pressure of the major pigeon diseases remains low.
3. Optimizing the enzyme systems by providing quality food and good vitamins.
4. Improve metabolism by making sure that the intestinal flora is in optimum condition. As said you can contribute through regular acidified drinking water supply. (Apple Cider Vinegar, Phytovitaliteit, resistance drink)
5. Regular monitoring of manure and throat of the pigeons on parasitic infections.



## *Pigeon Pedigree Puzzler*

*MSPA Newsletter Winter 2019*

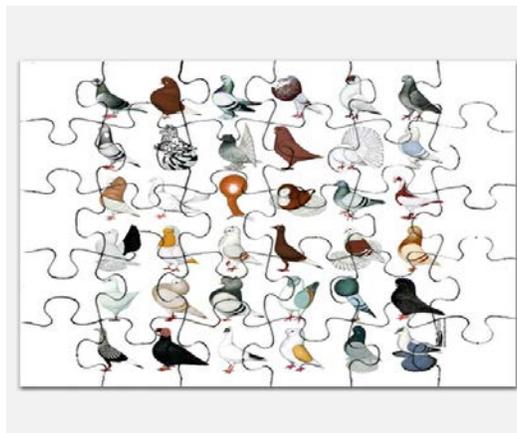
The Punnett Square is the oldest, tried-and-true, simple paper-and-pencil tool in the field of Mendelian genetics. It is discussed in all introductory treatments of basic genetics. Furthermore, in the Summer 2016 issue of the MSPA Newsletter, there was a long article on the underlying logic and use of Punnett Squares. Thus, all you students of basic pigeon genetics should have a working understanding of Punnett Squares, either from reading this newsletter or from other sources. This issue's *Pigeon Pedigree Puzzler* requires you to draw upon that understanding.

**Consider the mating of a Yellow Check cock, carrying blue and barless, with a Blue Bar Grizzle hen, also carrying barless.**

**Question:** Given the information provided above, which of the three Punnett Squares below, A, B, or C, is correctly conceived? Further, why is that one correct, and the other two incorrect?

		From Blue Bar Grizzle Hen		From Blue Bar Grizzle Hen		From Blue Bar Grizzle Hen			
		Bar	Barless	Grizzle	Bar	Bar	Barless		
From Yellow Check Cock	AshRed	Ash Red and Bar	Ash Red and Barless	AshRed	Ash Red and Grizzle	Ash Red and Bar	Check	Check and Bar	Check and Barless
	Blue	Blue and Bar	Blue and Barless		dilute	dilute and Grizzle		dilute and Bar	Barless
		<b>A</b>		<b>B</b>		<b>C</b>			

**For the ANSWER, go to Page 19.**



**Congratulations to Mark Ritter of Stacy, MN  
Winner of the 2018 National Birmingham Roller Club  
20-bird National Kit Contest.**

**Submitted by – Gail Peterson**

I am attaching a picture of Mark Ritter of Stacy, MN, holding the plaque he received recently for winning the 2018 National Birmingham Roller Club 20-bird national kit contest. I'm not sure if Mark belongs to the MSPA, but I don't think that should matter when it comes to recognizing an absolutely amazing accomplishment by a fellow Minnesotan pigeon fancier. I hope you will include this picture in the next MSPA Newsletter.

I want to emphasize two significant things that this plaque represents:

1. It is an amazing achievement in-and-of-itself for someone to win one of these annual NBRC 20-bird Roller kit competitions at the national level. There are competitors from all over the country (including from Alaska and Hawaii, and maybe even a couple in Canada), and the competition is intense. BUT ...
2. As the plaque notes, this is the FOURTH time Mark has won this national kit contest, which is something that has never been done before. So, basically, this is an amazing achievement *four-times-over!* And on top of that --- these four championship victories have all taken place within the last 5 years, i.e., he has been champ 4 out of the last 5 times. Furthermore, he was in the upper echelons of the top scorers the year he did not come out on top. Not bad, huh?

I am not 100% sure (memory is the first thing to go, you know), but I'm pretty sure I have been personally present to see all of these championship kits of Mark's with my own eyes; I certainly have been present on most of the occasions when Mark has flown in these contests at both the regional qualifier and national finals levels over the last few years. Over the last 60 years or so, I have seen a great number of Roller kits, to say the least, and as far as my personal life experience is concerned, these recent competition kits of Mark Ritter's are, hands down, the best I've ever seen. Also, the year-to-year consistency is extremely impressive. So, to the extent that I am qualified to comment on it, I have no hesitation in saying that these National kit flying championships Mark Ritter has won are all solid-gold legit. No flukes. This is the real deal, no doubt about it.

Mark retired a couple months ago and I expect him to be a fairly regular attendee at our monthly lunches at Old World Pizza (he was there in November already). He is quite a character and I think you'll enjoy getting to know him.



*Mark Ritter of Stacy, MN*

## Let There Be Light

Submitted By - Tim Kvidera

By the time this gets published, hopefully, we have made it through the winter in good shape. The shorter daylight periods are capable of producing SAD, Seasonal Affective Disorders, amongst many of us humans with the dreary short days and long nights. It is also a time when our pigeons naturally shut down for the season. But as the days start to get longer, they begin to get in the mood and think about beginning the breeding cycle. Up here in the northland pigeon fanciers often target Valentine's Day with pairing up their breeders. But just because us humans are sharing flowers, candy and amorous intentions that does not mean our birds will be in the mood.

There is a natural rhythm to the cycles that our birds would normally go through. As the days get longer, weather warms up, grass, flowers and grains grow Mother Nature has programmed the birds to know there will be extra food sources available to feed their offspring. But we pigeon breeders have a different agenda than Mother Nature and our calendar does not correspond to hers. We need to have the next generation sooner than they would normally come in the wild. We have to get youngsters ready for competitions - races, shows, etc. And if we are showing against Southern fanciers, we Northerners need to get a jump on the breeding season to compete with the warmer weather guys.

Heated lofts can help. But the main driving force to get the birds going is length of photoperiod. During the shorter days the birds' gonads, the testes and ovaries, go into a dormant state. We need to simulate spring to get them on track by extending the amount of light they are exposed to, making their bodies think it is later in the calendar year than it really is.

How long to we need to make the "day" be? Studies on assorted avian species have indicated that at least twelve hours of light is needed. Most pigeon fanciers who control the breeding photoperiod suggest fourteen hours, or more. Where do you add the extra hours? That depends on your personal situation. Consistency is more important than time of day. Some add a few hours to both morning and night. Some to just the morning, others to just the night. I have tried all three and not found significant differences in the breeding pen.

The sections of my loft are set up with two separate light circuits. One that I can flip on in the individual sections whenever I enter and need added light to work with the birds and then turn off as I leave. The other circuit is on a timer and will light all the needed sections to give the birds the desired photoperiod. During breeding season, I feed the birds twice a day to ensure youngsters get fed at least twice a day. Prior to retirement, I augmented the natural daylight period on the evening end. That way birds were fed in the morning after dawn and in the evening, they were fed under lights. Now that I can feed in the late afternoon, I have the lights come on pre-sunrise and let the birds retire for the day under natural sunset.

There is no need to step the amount of lighting down if the lights are used at the end of the day. The birds will adjust to living with the bright going to dark with the flip of a switch, not needing a dimmer along the way. It is not necessary to have the lights on throughout the whole "day." In the morning, you can have them turn off sometime after sunrise. No need to burn up the excess electricity.

How much light is needed? I do not know of studies having been done as to how many lumens (measure of light intensity) are needed. If there is enough light for you to see well and function in the loft it assuredly is enough for the birds. In the era of incandescent bulbs, I have successfully used 25, 40 and 60 watt bulbs, varying in rating depending on the size of the section being lit. Now that we are into using LEDs the wattage numbers are much lower. You choose a version that generates an equivalent amount of light at a fraction of the electricity usage.

Another lighting aspect that should be considered is the spectrum of light used. Not all light is the same. Although we have no studies as to the efficacy of warm white verses cool white verses daylight rated bulbs on the photoperiod extension effects on pigeons, it does affect how we see the birds. The color we see is dependent on the frequency of light that is bounced off the article being viewed.

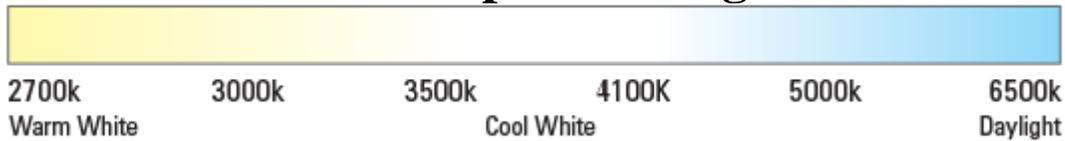
This point was really driven home to me decades ago when I visited a friend who was working on a project to introduce a new color into a different breed. When we went out to the loft that night, he flipped on the lights and we visited while looking at the project birds. As a gracious guest, I took a number of photos of the birds that I was seeing, even though they were looking not all that impressive. A week later, when I got the film developed (sorta lets you know how long ago this event was, pre-digital) I was amazed at the color of the photographed birds. Nothing as blaa as my mind's eye had seen and remembered from that night. Those birds in the photos were really fairly spectacular. We were viewing them in a loft equipped warm white fluorescents. My camera flash is broad spectrum daylight. The American Archangel Club specifies that its meets are judged using standardized daylight rated lighting to ensure reproducible, consistent judging conditions when evaluating this breed of color pigeon.

Light bulbs - incandescent, CFLs and LEDs - have a number of specifications documented on the packaging. Most people are familiar with wattage, as that is how much juice the bulb will use, what you are going to pay on the electric bill when you use it. With the advent of LEDs, we know to look for wattage equivalents as an indication of what LED to use to get the same amount of light as the old incandescent bulb. This will usually have a similar amount of intensity, lumens, at a much lesser wattage. But another aspect to consider is the color temperature in degrees Kelvin, °K. Bulbs are labeled with color temperature typically varying from 2000°K to 6500°K. The low end of this range is the warm white spectrum. 5000°K to 6500°K is considered daylight and is a much more clean, blue white than the yellower warm white. Daylight gives a truer, better contrasting rendition of the color being evaluated. So if you want a nighttime viewing of your birds to duplicate what you would see during the day, I would suggest not using warm white rated lighting.

As increasing the photoperiod triggers the breeding cycle, shortening of the photoperiod affects birds moulting. Shorter days tell them that winter is coming, and it is time to grow a new coat to protect them from the nasty weather ahead. Homer flyers are much more in tune with topic of achieving the desired plumage condition than the average show breed fanciers. But the same principles would apply, and getting ones exhibits in prime feather would be a competitive advantage in the show ring.

**Sidebar information to potentially accompany "Let There Be Light" article**

### Kelvin temperature light scale



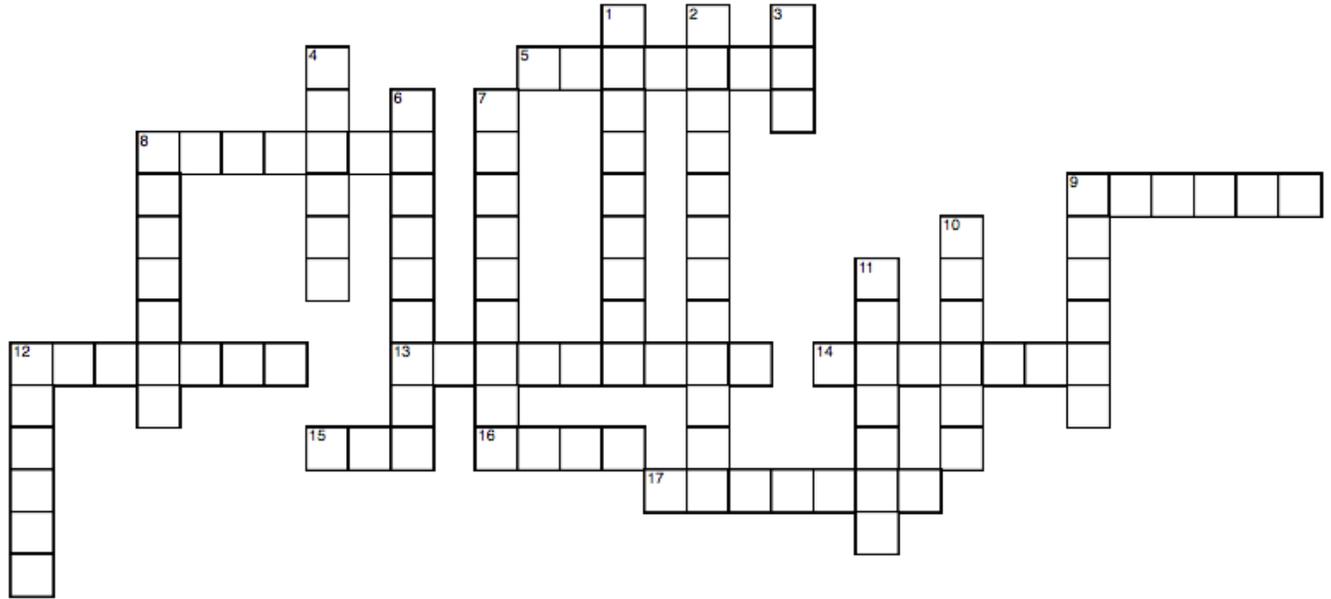
### Equivalent Wattages and Light Output of Incandescent, CFL, and LED Bulbs

Light Output	LEDs	CFLs	Incandescents
Lumens	Watts	Watts	Watts
450	4-5	8-12	40
750-900	6-8	13-18	60
1100-1300	9-13	18-22	75-100
1600-1800	16-20	23-30	100
2600-2800	25-28	30-55	150

## Pigeon Crossword Puzzle

### MSPA Winter 2019

**Hint: Every answer is the name of a breed of purebred pigeon.**



#### ACROSS

- 5 rhymes with “cargo”
- 8 around-the-clock flyers
- 9 rhymes with kooky
- 12 Indian \_\_\_\_\_
- 13 oxymoron about size
- 14 head covered by hood of feathers
- 15 wise old bird of the forest
- 16 Queen’s husband
- 17 British cavalryman; giant fire-breathing lizard

#### DOWN

- 1 Harry James’ famous talent
- 2 an early settler of the territory west of Louisiana
- 3 devout Catholic woman of deep religious commitment
- 4 all white except tail and skullcap
- 6 Travolta’s character in “Michael”
- 7 curly feathers all over
- 8 “Shave and a haircut, \_\_\_\_\_!”
- 9 a gazzi or a schietti
- 10 capital of Punjab province in Pakistan
- 11 to pass down the throat
- 12 decorative feathery fringe on the breast

**The solution is found on page 26 of this Newsletter.**

## **Minnesota State Pigeon Association Membership Awards**

The MSPA has recognized individual members during different administrations, but has not gone on record with publication of guidelines or qualifications as to when, and to whom, such recognition should be awarded. These awards include the Lifetime Recognition Award and the President's Award, and are typically presented in conjunction with the annual MSPA North Star Classic pigeon show. Below are the guidelines used when the candidates are being considered.

### **MSPA Lifetime Recognition Award**

The MSPA Executive Board may confer a Lifetime Recognition Award to longtime members who they feel worthy of said recognition. This honor does not have requirements which automatically qualify a member for Lifetime Recognition Award status. It is an honor, infrequently awarded, to worthy candidates. Any MSPA member may nominate a fellow member for consideration by the MSPA Executive Board. The Executive Board will keep the proceedings confidential and decide by majority vote the outcome of such nomination. Those approved for this recognition will be presented a plaque commemorating the Lifetime Recognition Award and announcement of the award will be published in the MSPA newsletter and elsewhere as deemed appropriate.

A non-exhaustive list of qualifications the MSPA Executive Board will take into consideration includes -- the age and personal situation of the individual, length of time the candidate has been a member of the MSPA, how active they have been in supporting the organization over the years through officer and committee member activities, show and swap set-up/tear-down participation, attendance at club meetings, exhibiting at MSPA and other club shows, promoting the MSPA throughout the pigeon fancy, promoting the pigeon hobby in public forums, mentoring novice pigeon fanciers, activity in specialty clubs for the breed/s they raise, contributions to the pigeon hobby through articles, science, husbandry, etc.

### **MSPA President's Award**

The presiding MSPA president, at his/her discretion, may present a President's Award to a MSPA member who has provided the president, the MSPA and/or the pigeon hobby significant service in the recent past which is worthy of specific recognition. The recipient of the President's Award is solely chosen by the MSPA president and the award is not required to be given annually. Those chosen for this recognition will be presented a plaque commemorating the MSPA President's Award and announcement of the award will be published in the MSPA newsletter and elsewhere as deemed appropriate.

## Special Awards

In addition to the above awards, MSPA members can be occasionally honored for service to the pigeon hobby with the presentation of awards appropriate to the situation. Record of these awards will be tabulated along with the record of other membership awards.

### List of MSPA Membership Award recipients

#### Lifetime Recognition Award

2012 Richard Okeson  
2012 Roger Steinbruckner  
2013 Don Steinbruckner  
2014 Bill Tietze  
2015 Mike Gartner  
2015 John Johnson  
2015 Tim Kvidera  
2016 Gary Gorman  
2017 John Jopp  
2018 Bruce Rhode

#### President's Award

2012 Deborah Lepinski  
2012 Rhode's Pigeons  
2014 Jeff Clemens  
2014 Kathryne Rhode  
2015 Tim Kvidera  
2017 Kathryne Rhode  
2018 Patti Dietzel

#### Special Awards

**2016 Paul Lepinski - Lifetime Dedication Award**



## Pigeon Pedigree Puzzler

MSPA Newsletter Winter 2019

Consider the mating of a *Yellow Check cock, carrying blue and barless*, with a *Blue Bar Grizzle hen, also carrying barless*.

**Question:** Given the information provided above, which of the three Punnett Squares below, A, B, or C, is correctly conceived? Further, why is that one correct, and the other two incorrect?

		From Blue Bar Grizzle Hen		From Blue Bar Grizzle Hen		From Blue Bar Grizzle Hen			
		Bar	Barless	Grizzle	Bar	Bar	Barless		
From Yellow Check Cock	AshRed	Ash Red and Bar	Ash Red and Barless	AshRed	Ash Red and Grizzle	Ash Red and Bar	Check	Check and Bar	Check and Barless
	Blue	Blue and Bar	Blue and Barless		dilute	dilute and Grizzle		dilute and Bar	Barless
		<b>A</b>		<b>B</b>			<b>C</b>		

**Answer:** Square C is the correct one because the genetic factors it considers are *allelic*, that is to say, they are *alternatives* of the *same gene*, in this case, the pattern gene. Square A is incorrect because the genes from the cock are not allelic to the genes from the hen, i.e., color genes versus pattern genes. Square B is incorrect because the factors are not only non-allelic *between* the mated individuals, but also non-allelic *within* each individual, being color vs intensity in the cock and grizzle vs pattern in the hen. In Punnett Squares, the factors must be allelic to make sense.

Logicians call the errors in Squares A and B *category errors*. In every day parlance we often speak of “apples/oranges comparisons”, which is our colloquial way of referring to category errors. Below, the matrices of fruits parallel the logically correct and incorrect structures of the Punnett Squares above and are intended to illustrate the same kinds of errors we saw in A and B, as well as the correct logic of Square C. Can you see why we have “nothing but oranges” in Square C?

		🍊	🍊			🍌	🍊			🍊	🍊
🍏	🍏 🍊	🍏 🍊	🍏	🍏 🍌	🍏 🍊	🍏	🍏 🍏	🍏 🍏			
	🍏 🍊	🍏 🍊		🍏 🍌	🍏 🍊		🍏 🍏	🍏 🍏			
		<b>A</b>		<b>B</b>		<b>C</b>					

## Levi's Powdered Droppings Revisited

Submitted by- Gail Peterson

Wendell M. Levi (1891-1976) was an impressive man: graduate of the University of Chicago School of Law, WWI US Army infantry captain, lawyer, author, columnist, problem-solver, businessman and entrepreneur. And to the everlasting gratitude of pigeon fanciers of every era everywhere, he was a lifelong student and scholar extraordinaire of *Columba livia*, the pigeon. His 1941 book *The Pigeon* will forever be the definitive work on the subject.

**The matter at hand.** To paraphrase Hamlet, to clean or not to clean, too clean or not too clean -- these are the questions. How clean must a pigeon loft really be? Wendell Levi had a definite opinion on the matter, strong, clear, and consistent, and he expressed it many times during his long career. His first public statement of it came in 1927 in an *American Pigeon Journal* article, but he reiterated it time and again over the next half century:

The floor of the loft should never be scraped. The days of 'scrape, scrub, and spray' are over. The droppings should be allowed to accumulate until they form a protective carpet from one to four inches thick. . . . This covering is dry, odorless, and moisture absorbing. The moisture of fresh droppings is immediately absorbed in it with germicidal action against most germs. This powder is clean! (Levi, 1941/1974, p. 443).

Wait – what?? He was kidding, right? That advice seems completely contrary to common sense and to what any well-bred, self-respecting, totally-modern civilized person would do. But no, Levi was not kidding; he was 100% serious. He swore by his *powdered droppings* method of floor litter and truly believed it to be far and away the best approach to pigeon husbandry. Furthermore, his powdered droppings method was and is practiced and endorsed by numerous other respectable pigeon fanciers, especially "old school" practitioners and writers in the older literature of our hobby. The British racing pigeon fancier Major A. Neilson Hutton, for example, was a strong proponent of Levi's powdered droppings approach and included a long and detailed appendix on it, contributed by Levi, in his book *Pigeon Lore* (1962). Neilson Hutton used the method in his own lofts, and noted that it was also used by a number of other successful British racing homer breeders.

The first time I personally saw the powdered droppings method employed to its full extent was about 50 years ago, when I was living in Indiana. A Roller friend of mine, the late Dick Owen of Albion, Indiana, did it that way. Owen usually had about 200 Rollers on hand, and he used dried droppings as the litter in all his pens -- kit pens, holding pens, breeding pens. When I first saw it, I didn't know what in the world it was; I thought maybe it was a clay-based kitty litter or something like that. It was a light gray, somewhat granular powder two or three inches deep. I was downright flabbergasted when Dick told me it was nothing but pure pigeon droppings. There was no odor to it, nor, as I recall, was there any sign of dust in the air. The overall ambience in his large loft was actually quite pleasant. I hasten to point out that Dick Owen was an unusually knowledgeable and well-regarded pigeon man, so this was not the practice of someone

who simply did not care or know better. His pigeons were well cared for and in excellent health. So, from that experience I learned to keep an open mind about powdered droppings as litter, and not to regard it as the misguided idea it had at first struck me as being.

Nevertheless, until last year, I never adopted the Levi powdered droppings method myself. I occasionally set out to give it a try, but I never actually followed through on it because I soon found it too disgusting and crude to stick with it. My reaction in this regard appears to have been typical. To quote Neilson Hutton:

For the benefit of those who may contemplate adopting the powdered droppings method as already outline in the appendix by Mr. Levi, I venture a word of advice on getting this method started. As Mr. Levi has said, this is the hardest part. From my own personal experience and those of a few friends the initial difficulties are more psychological than real for several reasons. First the habits of perhaps a lifetime are not easily discarded and after years of scraping and cleaning it does not go down well at first to see the loft become apparently untidy and neglected looking, compared with the daily scraping days. Secondly, the rising pile of droppings under the perches to begin with presents a problem until there is an accumulation of dry powdered droppings to absorb the moisture of the fresh droppings, thus accelerating the disintegration into powdered droppings. In consequence the new method may be abandoned before it has had a fair trial. Lastly because of their structure, it is not every loft that is suitable for the successful practicing of this method, which demands good ventilation and the perfect dryness which goes with it. (Neilson Hutton, 1962, Pp. 225-226.)

Starting the powdered droppings method this way, which is the way Levi advised, sounds quite unpleasant, as indeed it is. However, a bit later in the same paragraph, Neilson Hutton suggests another way to get the ball rolling:

First of all, gather the droppings scraped from the loft, break them up and spread them out somewhere to dry naturally. When you have accumulated enough dried droppings to cover the loft floor, nest box floors and tops and other shelves to the depth of from two to three inches, spread it out and this will give the method a good start. Fresh droppings will become quickly absorbed and in turn disintegrate into powder. (Neilson Hutton, 1962, P. 226.)

**A work in progress.** Have you ever noticed how nice-looking and appealing fresh pigeon droppings are in the late fall and early winter, after the molt is done? You haven't? Well then, maybe it's just me, but I think they're quite nice; so pleasingly consistent in that attractive dark brown coloration, solid and well formed, smooth and firm, with that neat white cap on top, and no little feathery pieces mixed in. It seems a real shame to throw all that lovely stuff away, don't you think? That was the gist of my thought process, anyway, in the winter of 2017/2018, and so, taking my cue from Neilson Hutton, I spent the winter dutifully collecting all the rock-hard frozen perch scrapings and transporting them to the garage, where I spread them out on a large metal pan and dried them under a heat lamp. (Funny side note: My next-door neighbor asked if I was baking up a batch of Cajun food or something in the garage, the aroma was so scrumptious.) By

spring I had a bushel of beautiful toasted pigeon poop with which to initiate my powdered droppings study.

I decided to make a side-by-side comparison of powdered droppings litter versus chipped aspen litter (cf., Kvidera, 2016). Accordingly, I put the bushel of dried droppings on the floor of my extra hen pen, and a comparable amount of shredded aspen on the floor of my extra cock bird pen. I also suspended the practice of scraping the V-perches in those two pens, and just let it all go for the whole summer. On the floor, the covering of dried droppings resembled small marbles, about the size of pea gravel. They stayed in place nicely as the birds fluttered about and walked around on them. They took a little getting-used-to by me, but the birds had no problem with them. And again, just as Levi said, there was no odor and, importantly, no dust. And so it went for the rest of the summer. In sum, the powdered droppings litter performed as advertised.

As for the comparison, in my opinion, all things considered, the two kinds of bedding worked out about the same, although they looked quite different. The powdered droppings looked to be exactly what they were: an enormous quantity of dry pigeon poop, whereas the shredded aspen resembled a wilderness forest floor. There was no fresh forest scent to the dried droppings, of course, but they didn't smell bad either. Visitors to the loft, however, clearly preferred the aspen chips.

I kept the powdered droppings in place from mid-April to mid-August, about four months. I raked it all up and bagged it away for future use before the molt began in earnest. My plan is to use this same supply of powdered droppings litter in a repeat of the study this coming season; I am not going to bake up a new batch this winter.

**Pros and cons.** Personally, I rather like the Levi method, and if I lived way out in the boondocks and had no one but myself to consider, I'd probably use it routinely. It certainly reduces the time and effort required to care for your pigeons, which might be one of the reasons it appealed to Levi in his large, industrial-scale squab operation; it must have cut his labor costs significantly. I did not detect a visible increase in dustiness, but it stands to reason that that powdered droppings do contribute particulate matter to the air, whether we can see it or not. After all, we know that microscopic dust particles from pigeons are a problem no matter how clean everything is; they are even a concern in a large, well-ventilated exhibition space at a one-day pigeon show where all the pigeons are clean, and all the bedding is fresh and new. For that reason, I always wear a dust mask whenever I spend more than a few minutes in the loft, a practice I highly recommend to everyone, and I would certainly recommend that practice for anyone using the powdered droppings approach. Bird droppings in general, and pigeon droppings in particular, have long been a public health concern, the primary risk being exposure to the fungus *Cryptococcus neoformans*, potentially leading to the serious disease Cryptococcosis, which can affect many different organs of the body (cf., CDC website). A close reading of current biomedical literature, however, strongly suggests that this risk has been exaggerated in the past, and that it is highly unlikely that normally healthy adult humans living in modern western countries will contract the disease, even if exposed to *C. neoformans*, especially if simple precautions are taken. So – if you wear a mask and wash your hands, you should be all right.

Although catching a fungal disease from powdered pigeon droppings may not be a major concern if you live in modern America, other aspects of modern American life may well

be. For example, our obsession with everything being shiny and new, neat and clean, spic and span, etc., definitely comes into play. A pigeon loft managed under the powdered droppings approach does not look neat and clean or spic and span. It looks downright filthy, and that's what friends, relatives, neighbors and city inspectors are likely to think of it.

Even some of your fellow pigeon fanciers may take a dim view of your husbandry if you go the Levi route. Consider this recent statement by Stacie Grannum, a veterinarian in Arizona who is also a pigeon fancier of 20 years' experience:

Clean you lofts regularly! Bird droppings and other contaminants can spread infectious diseases and parasites. Remove excrement and uneaten food daily; clean drinking containers, hoppers, and feeders daily; disinfect weekly. (Grannum, 2017, p. 58)

This leads us back to the beginning of this article: Too Clean or Not Too Clean? Can cleaning be carried too far? I think maybe so. Consider, for example, the young fellow from New York City who moved to the country and took up raising chickens. He was soon appalled by how "disgusting and unhealthy" the chicken coop became, with the chickens pooping all over the place the way they do. His solution:

For years now we have used tongs to pick up chicken poop in the morning, in the late afternoon, and one more time at night just before lights out. ... Picking up frequently means the bedding (in our case sawdust inside and hardwood chips outside) is pretty much always clean. The chickens are not walking in manure, scratching manure, or ingesting manure. This has got to be better for their health, and it conserves bedding material because you only pick up a little bit with the poop. (Winslow, 2018, P. 20.)

I don't know about you, but I think picking up every little lump and dump of chicken poop three times a day with a pair of big tweezers is carrying things too far in the other direction from the Levi method. In fact, believe it or not, there is a school of thought in 21<sup>st</sup>-century medicine that argues that we modern westerners have become too clean for our own good (e.g., Bloomfield, Rook, Scott, Shanahan, Stanwell-Smith, & Turner, 2016). The argument is that we protect our children and ourselves from germs too much, that a little exposure to dirt and germs is good for us. Contact with dirt and germs challenges and stimulates our natural immune system, and that by preventing this natural buildup of immunity by making everything ultra-sterile, we are actually making our kids and ourselves more vulnerable to illness. A similar argument can be made for pigeons (e.g., McLaughlin, 2017). Wendell Levi would no doubt agree.

But the problem of aesthetics, of satisfying public expectations and *perceived* standards of sanitation and propriety remains, and it is not to be taken lightly. Pigeon lofts nowadays are built better and are generally much more attractive than they were in days gone-by, due largely to community standards of what is and is not acceptable. To ensure the continued acceptance of the hobby within our broader communities, we need to be similarly concerned with how our lofts look on the inside. When it comes to floor litter, being a Levi's powdered-droppings purist may not be the most politically prudent way to go. A "deep litter" system consisting of a mixture of dried droppings with an absorbent substrate of some kind, such as sawdust, wood chips, hemp fiber, or ground corncobs, etc., would seem a reasonable compromise. The larger point, however, is that dry pigeon

droppings in the coop are NOT horrible, awful, dreadful things to be immediately removed from the premises. They are unavoidable, normal, and, in fact, may even have beneficial properties.

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## **TORPOR – Warm in Winter**

**By- S.B. Wylie, Esq., CD.**

In another article titled 'Warm In Winter' I noted pigeons going into a REM type of sleep on those cold winter nights during which time 'Circa Diem' occurred. This time I thought that I should explain what that sleep pattern is really all about.

It is called 'torpor'; and torpor is a state of [slowed body functions] used to conserve energy and heat, similar to hibernation but not as extreme. Torpor is generally only a short-term state, such as a few hours or overnight, though in some cases, and for a few species, it can last several days or even weeks. Birds that face extreme winter conditions will use torpor to survive those long winter nights. When a pigeon enters a state of torpor it lowers its body temperature and slows its heart rate, respiration and metabolic rate dramatically. This effectively conserves energy because fewer calories are needed to maintain life functions, such as respiration and blood circulation. Metabolic rate can actually decrease up to 95 percent. Circa Diem, or Circadiem, is often referred to as being the 'body clock'. The circadian rhythm is a cycle that tells the body when to sleep and when to rise, while regulating many physiological processes. This internal clock is affected by environmental cues such as temperature.

Torpor can be dangerous for birds. During the time when a torpid bird's metabolic

functions are slowed, their reflexes and reaction abilities are also stunted, making them more vulnerable to predators. This is particularly true at night, when nocturnal predators may be alert for easy prey and torpid birds cannot react to danger as quickly. Many birds first come out of this sleep-like state through shivering, and they may sun themselves for several minutes while awakening. During this waking up period, their reactions are still slower than normal. It can take from several minutes to nearly an hour to awaken from torpor, and a ready food source should be available for the bird to replenish its energy supply immediately. If no food is available, the bird can remain vulnerable because it cannot rejuvenate sufficiently.

What Torpor Isn't

Because torpor is not frequently observed, it can be confusing to see a torpid bird.

Understanding what torpor 'is Not' may help pigeon fanciers better recognize different unique bird and animal behaviors. Importantly then, Torpor is not...

**Hibernation:** Hibernation is a long-term state of reduced metabolic activity that often lasts several days or weeks at a time. It is a seasonal condition and may occur during either summer or winter depending on the species. Torpor, on the other hand, is a much shorter period and can occur at any time.

**Sleeping:** When birds sleep, their metabolic functions may slow slightly, but the changes are not as radical as those during torpor. Birds will sleep daily, but may not enter torpor unless conditions are extreme, and some birds will never use torpor at all though they still sleep regularly.

**Sunning:** When sunning a pigeon may appear lethargic &/or sleepy, similar to how they may appear if torpid, but there is no change in body temperature, respiration or metabolic functions when sunning. Birds can resume their normal activities immediately when sunning, and there is no warm-up period necessary as there is after being torpid. Many birds will use sunning as a way to come out of a torpid state, however, and the two are easily confused.

**Illness:** It can be startling to see a torpid bird and it is easy to think the bird is in some way sick or injured because it is not moving or acting as expected. Torpor is a natural, healthy, state and does in fact keep birds healthier because they are conserving energy that they will need for foraging, preening and staying alert at another time.

Many different birds will use torpor for different conditions. Wild bird species that regularly use torpor include: Hummingbirds, Poorwills, Frogmouths, Swifts, Nighthawks, Pigeons/Doves, Chickadees, and Roadrunners.

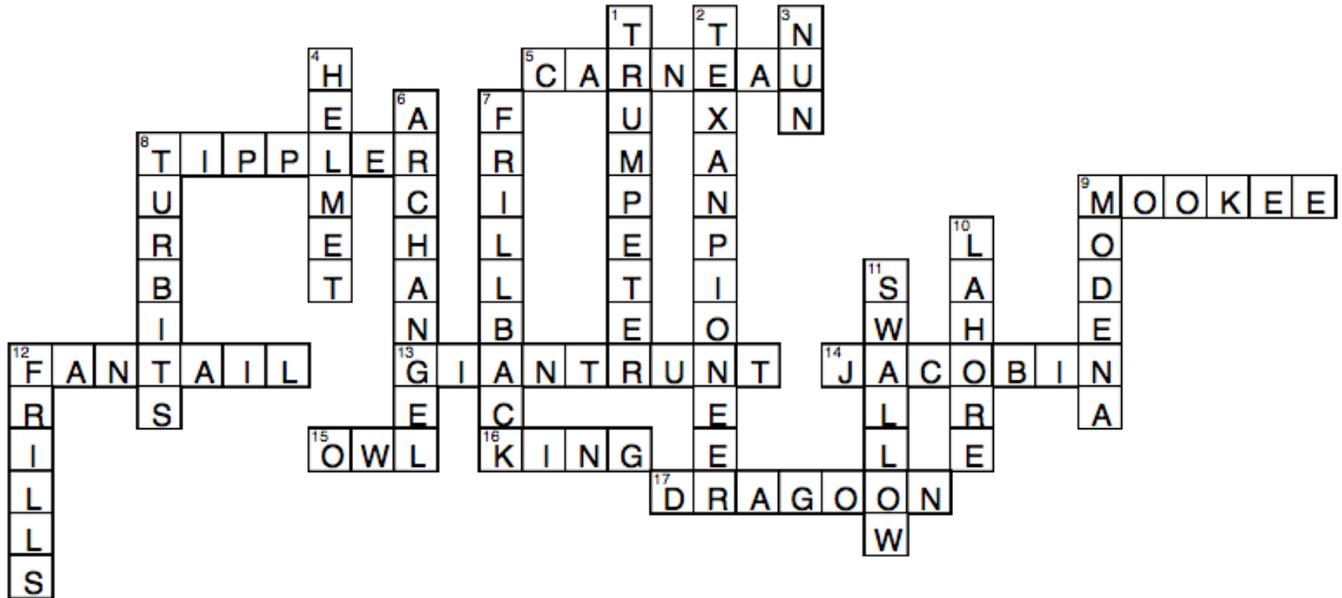
In addition to birds, a number of mammals are also known to enter torpid states under different conditions; these include bats, mice, hedgehogs and other rodents and small marsupials. Clearly then, torpor is 'not' seasonally dependent, and if conditions require it, some animals may become torpid at any time of year. This meaning that even on those extremely hot summer nights a pigeon, or other animals, will in fact, enter into a torpid state for relief.

For many years I had been told, and thus I held the belief that the 'Crop' grinds the feed during the night and doing so helps keep the pigeon warm. This is totally incorrect; ridiculous! When in torpor, digestion (grinding) is all shut down. Please ensure that you feed your birds 'long before' they go to roost.

## Pigeon Crossword Puzzle

### MSPA Winter 2019

#### Crossword Solution:



#### ACROSS

- 5 rhymes with “cargo”
- 8 around-the-clock flyers
- 9 rhymes with kooky
- 12 Indian \_\_\_\_\_
- 13 oxymoron about size
- 14 head covered by hood of feathers
- 15 wise old bird of the forest
- 16 Queen’s husband
- 17 British cavalryman; giant fire-breathing lizard

#### DOWN

- 1 Harry James’ famous talent
- 2 an early settler of the territory west of Louisiana
- 3 devout Catholic woman of deep religious commitment
- 4 all white except tail and skullcap
- 6 Travolta’s character in “Michael”
- 7 curly feathers all over
- 8 “Shave and a haircut, \_\_\_\_\_!”
- 9 a gazzi or a schietti
- 10 capital of Punjab province in Pakistan
- 11 to pass down the throat
- 12 decorative feathery fringe on the breast



**Minnesota State Pigeon Association  
MEMBERSHIP APPLICATION/RENEWAL FORM**

**Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_      **New** ( )    **Renewal** ( )

**Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**City, State, Zip Code:** \_\_\_\_\_

**Phone Number:** (\_\_\_\_) \_\_\_\_-\_\_\_\_      **Cell Number:** (\_\_\_\_) \_\_\_\_-\_\_\_\_

**E-mail Address:** \_\_\_\_\_

**Bulletin Option:** ( ) Read on MSPA web site, ( ) E-mail, ( ) Postal Delivery

**Membership Options and Dues:**

**Individual** ( ) \$10.00

**Family** ( ) \$15.00

**Junior** ( ) \$5.00

*Please note: The membership year is January 1<sup>st</sup> to December 31<sup>st</sup>. Any new memberships received after November 1<sup>st</sup> will be applied to the following year unless specific instructions are provided to apply the dues to the current year.*

**Mail to:**  
**Patti Dietzel**  
**MSPA Treasurer**  
**12355 134<sup>th</sup> Street**  
**Cologne, MN**