AVIAN FLYER

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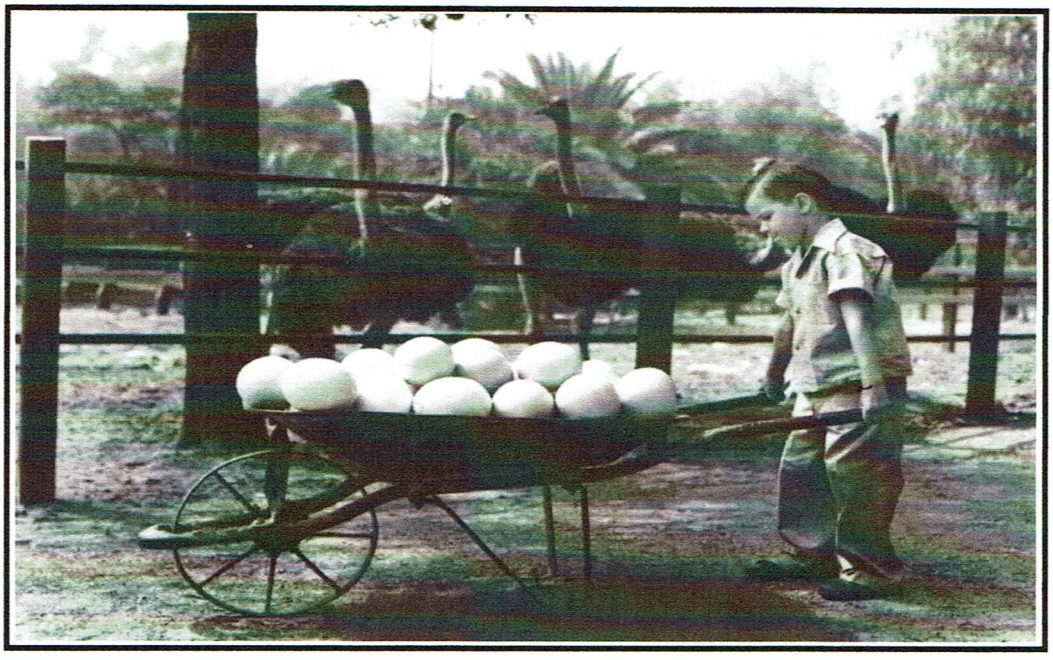
IN THIS ISSUE

Spring begins March 19th!



HAPPY EASTER EVERYONE!

Yes, Easter comes early this year—the last day of this month, to be exact. Easter naturally makes us think of eggs (ok—maybe a bit more than usual), so this issue is devoted to eggs. We have an article about exactly how birds make eggs, an article on 'egg binding' in our hens, and a few interesting facts about record breaking eggs—including an x-ray that you won't want to miss seeing!

This month's meeting will be a good one. Our speaker is member Mike Dahl. Mike is a top breeder of English budgies, as well as being one of the most highly respected budgie Judges in the country! He will be sharing tips and answering questions. Those of us who were at the bird sale last month got a chance to see his outstanding birds. (Hopefully he will bring a few with him to the meeting!)

This meeting will also be important as we have a choice of venues for our show this year and we need to vote on this so we can get our deposit in and the location locked down. We can either go to Cascade Hall at the Oregon State Fairgrounds in Salem for our fourth year in a row, or return to the Firstenburg Community Center in Vancouver, Washington where we held our show several years ago. Historically we have changed the venue location every 2 years, so this vote will be extra important as to whether or not we want to change that tradition. Plan on attending in person or on ZOOM. Have a blessed Easter everyone!

Caleb Coblentz & Beth Murphy
Avian Flyer Co-Editors

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THE PREZ SEZ

Hi Bird Breeders! March is here and spring is in the air (although it got off to a cold start). My wife and I have a hummingbird sitting on her tiny nest under our back porch. This is her third year to do so. I hope you all have a great spring and breeding season.

I am very excited about our March meeting and program. Mike Dahl, one of our club members, has agreed to present the program on Breeding English Budgies. You may not know it, but Mike is one of the (if not the) premiere breeders in the US. He is also one of the top judges in the nation. We are very fortunate to have him as a part of our club. His knowledge and experience with Budgies and other birds is exceptional. I am looking forward to hearing what Mike has to say and for the opportunities for us to ask questions. Remember you can join us in person or by Zoom.

We had a really good turnout for our February sale. It is always a pleasure to see so many beautiful birds raised by our club members. I enjoyed visiting with many of you.

Our CCC Board of Directors will meet on March 9, 1:30-2:00 pm. The show committee will meet 2:00-2:30 pm. Our General Meeting and program will be 2:30-3:30 pm, followed by refreshments. You are welcome to attend all or parts of these meetings, in person or via Zoom. A Zoom link will be sent out a couple of days prior to the meeting.

Dan Pitney

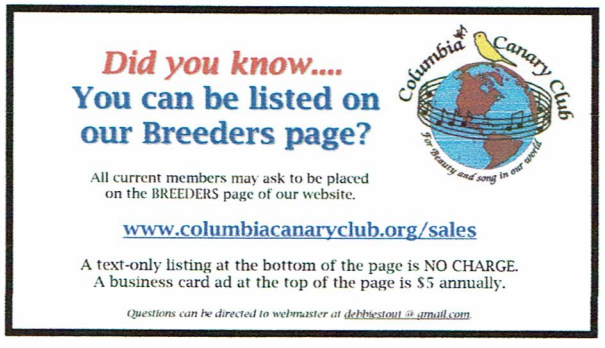
February Treasurer's Report

Beginning Account Balances:
Checking-$4,852.06
CD- $7,143.12
TOTAL- $11,995.18

EXPENSES: None

INCOME:
CD Interest- $29.28
Bands- $375.00
Online Ads-$10.00
Membership Dues-$435.00
Sales Tables (Bird Sale)-$240.00
Public Admissions at Bird Sale- $53.00
Donations at Bird Sale-$50.00
TOTAL- $1,192.28

Ending Account Balances:
Checking- $6,190.06
CD- $7,172.40
TOTAL- $13,362.46



BABY LOVEBIRDS FOR SALE!!

Club member Roftin Reginald has adorable baby lovebirds for sale, all from their own stock. They have a variety of colors available as well, so if you have been thinking about adding some lovebirds to your aviary now is your chance!! $90 for one but will negotiate if you buy more! They are located in Portland. Contact her at 971-269-9196 or by email at roftin567 @gmail.com.

CANARY BAND INFORMATION

Hello fellow Columbia Canary Club members,

I have received our club's 2024 band order for 2,000 CCC bands.

The cost of the bands are 35 cents each. A minimum of 10 bands must be purchased.

Shipping is $5.00 per order. (If you are paying for orders for two people, please include $5.00 per person for shipping, since they need to be shipped to different addresses.)

Bands can only be purchased after you have paid your 2024 membership dues.

If you wish, you may pre-order your bands at this time. I will start shipping bands on Tuesday, December 26th.

If you would like to place an order, please email, call or text me at:

nshoffmann@comcast.net (please note the 2 F's and 2N's in my last name.) phone: 360-480-5240

Checks or money orders should be made out to: Columbia Canary Club.

Looking forward to working with you. Wishing everyone a great 2024 breeding season!

Kind regards,

Norma Hoffmann

How Birds Make Eggs And Other Amazing Bird Egg Facts

Written by Barry Callisterin

Every bird on the planet lays eggs and they are a wide array of sizes, colors, shapes, and textures. How a bird makes an egg inside its body is fascinating and we are going to explore that process in this article. I am also going to sprinkle in some amazing bird egg facts along the way.

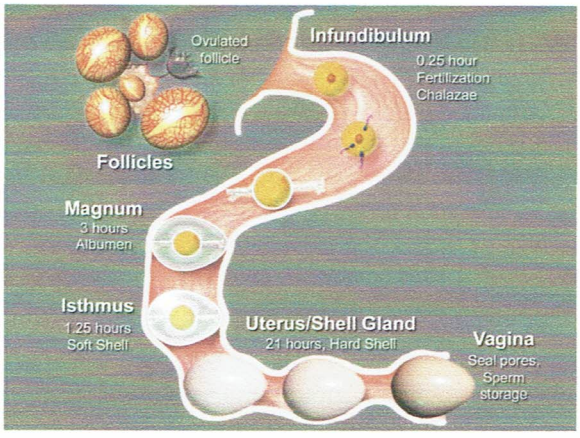
Birds make eggs within their uteri where papillae secrete mineral calcium which forms the shell. The inner parts of the egg, including the yolk and membranes, are formed in other parts of the bird's reproductive system. Each egg begins its life as an ovum in the left ovary of the bird.

Read on to discover so much more about how birds make eggs. You will learn why birds lay eggs in the first place, how eggs get their color, and many more incredible facts. Let's get started...

How Birds Make Eggs

There are two forms that a bird egg takes: the ovum and the egg. In the following paragraphs, I will refer to the unshelled egg as an ovum and the shelled or completed egg as an egg.

The image below shows the journey of the egg down the oviduct and each stage of development:



Let's break this down and look at each stage...

Each egg a bird lays begins its life as an ovum attached to the left ovary of the bird. Birds have two ovaries but only the left ovary develops. This is thought to be a weight-saving adaption necessary for flight.

When the bird ovulates, an ovum breaks free from the ovary and is "swallowed" by the infundibulum; a flattened, funnel-shaped opening at the top of the oviduct. This is where the ovum is fertilized by a single sperm; one of the millions or even billions that have found their way up the oviduct.

The ovum spends around 15 minutes in the infundibulum. This amount of time varies from species to species. From here, the ovum makes its way into a section called the magnum.

The magnum is a long, glandular section of the oviduct that secretes a substance called albumen. This is the protein-rich egg white that protects the ovum and eventually becomes the embryo's water supply. The ovum will spend around 3 hours in the magnum.

A narrow section called the isthmus is the ovum's next destination. Here the shell membranes form around it.

Next, the ovum moves into the uterus where the hard external shell is formed. The egg spends around 18-21 hours in the uterus while the mineral calcium shell forms. This time frame varies between species. It is within the uterus that the egg also receives its color and markings. This occurs courtesy of glands within the uterine walls that secrete pigments. If the egg spins while this pigment is being applied, it will become streaked.

Most birds will rotate the egg 180° in the last section of the oviduct so that it passes into the cloaca blunt-end-first.

Incubating The Egg

Once the eggs leave a bird's body, that's when the miracle happens. The female (in 95% of cases) will sit on the eggs to incubate them. This provides the correct temperature inside the egg for the embryo to begin to develop.

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The optimal temperature for embryo development varies between species but most embryos require temperatures between 37°C and 38°C (98.6°F – 100.4°F).

The incubation period lasts between around 11 days in some smaller finches to around 80 days in larger albatrosses. During that time, some amazing things happen inside the egg.

In chickens, the incubation period lasts around 20 days. Below are the stages the embryo goes through during that time:

Day 1	Embryonic tissue appears.
Day 2	Tissue development is visible. Blood vessels appear.
Day 3	Heart begins beating.
Day 4	The eye is pigmented.
Day 5	Elbows and knees appear.
Day 6	The beak appears and voluntary movement starts.
Day 7	Comb growth begins. Egg tooth begins to appear.
Day 8	The feather tracts are seen. The Upper and lower beaks become equal in length.
Day 9	The embryo starts to look bird-like and begins opening its mouth.
Day 10	Egg tooth becomes prominent. Toenails are visible.
Day 11	Tail feathers are apparent.
Day 12	Toes are now fully formed. The feathers become visible.
Day 13	Scales appear. The body is covered lightly in feathers.
Day 14	The embryo turns its head towards the large end of the egg.
Day 15	The gut is drawn into the abdominal cavity.
Day 16	The feathers completely cover the body. The albumen is nearly gone.
Day 17	Amniotic fluid decreases. The head is between the legs.
Day 18	The embryo growth is nearly complete. The yolk sac remains outside the body. The head is under the right wing.
Day 19	The yolk sac draws into the body cavity. Amniotic fluid is gone. The embryo occupies most of the space within the egg.
Day 20	The yolk sac is drawn into the body completely. The embryo becomes a chick and begins breathing air with its lungs. Internal and external pipping (breaking through the eggshell) occurs.

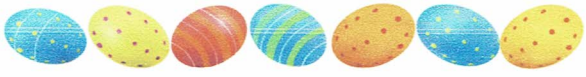
How Bird Eggs Get Their Color

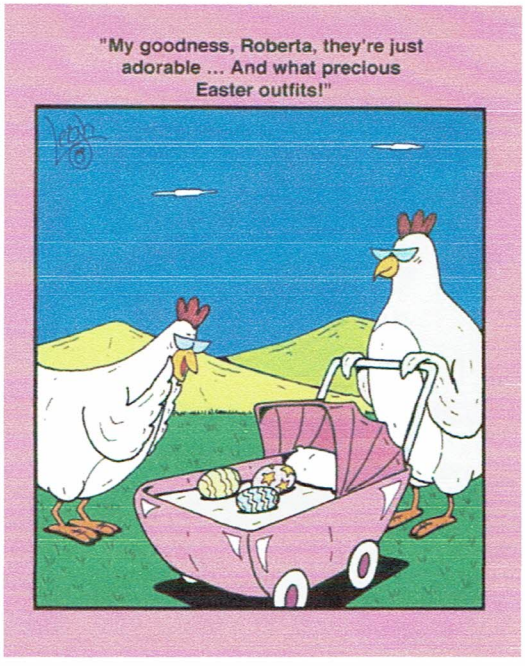
Bird eggs come in a myriad of colors. However, bird eggs are made from calcium which is a white substance so why aren't they all white? The reason for this is camouflage. Birds' eggs have developed over eons via natural selection to have coloration that blends them into the environment in which they are laid. For a species to continue and flourish, it helps if their eggs don't stand out to predators.

But where does all this coloration come from? The pigments that color the eggs within the female's uterus come from blood and bile. Blue and green colorings come from a pigment called biliverdin (the same pigment that causes bruises in humans) that comes from bile. Brown and red coloring in eggs come from a pigment called protoporphyrin that comes from blood.

The color in eggshells is also thought to provide sun protection, protecting the developing bird from UV rays. In addition, it also provides strength to the eggs. Birds that are calcium deficient tend to lay thinner eggs that are more prone to breaking.

Scientists have discovered that birds that have multiple clutches in a season will have more brightly colored eggs in the second brood when the female's calcium levels are depleted.





Egg Binding in Birds

By Carol Heesen

As we move through the breeding season, there is increased discussion of the problem of egg binding. What is egg binding? Egg binding is the inability of a hen to pass a developed or partially developed egg. A partially developed egg can have either a soft shell or no shell. Many cases of egg binding occur when a hen is trying to pass what appears to be a "normal" egg. The inability to pass the egg quickly results in the death of the hen.

There are a multitude of theories as to what causes egg binding. Many consider cool temperatures to be the deciding factor. I find this a very questionable theory. Birds in the wild often breed early in the spring while temperatures are still very cool and yet do not suffer from egg binding. I personally have Goulds successfully breeding in my outdoor flights when temperatures are down in the low to mid 40s. Despite raising hundreds of birds in cool conditions, I have not had a hen experience egg binding.

Another common theory is that the hen is too young. In parrots and budgies, where the bird continues to grow in size for 2 or more years, this may often be the case. The poor hen has just not grown sufficiently to allow the easy passage of the developed egg. Finches and canaries, however, grow and mature very quickly. Most have reached full adult size by the time they reach 4 months of age. In the wild, Goulds have often been observed raising chicks before they have even molted into their adult colors. I have observed this same phenomenon in my own flights when I have been a bit slow in separating my maturing juveniles.

Let me be quick to point out that I am not advocating breeding very young birds. The offspring of early breeding are not of the same quality as later breedings. It is best, I believe, to allow our birds to become older before attempting breeding. My point is only that early breeding does not, in my experience, result in egg binding.

Another common theory is that egg binding is the result of lack of calcium in the diet. Most of us offer a variety of calcium sources to our birds (egg shell, cuttlebone, oyster shell) and yet hens still die from egg binding.

I do believe nutrition is at the root of this problem. Most bird breeders are careful to offer a variety of calcium sources. Rather, I believe, the problem is the inability of the bird to metabolize the calcium that is readily available in the diet. The other major cause is poor condition of the mucus membranes in the vent area.

Let's look at each of these issues separately.

Calcium is used by the body to not only form the shell of the developing egg and maintain strong bones, but is also crucial in the proper functioning of the muscles. While it does take a large amount of calcium to form an egg shell, the hen also needs calcium for the muscle action needed to expel the egg.

Vitamin D3 is crucial in the absorption of calcium. Without it, all that good calcium we offer our birds passes right through the body without being absorbed. In outdoor flights, our birds are able to produce D3 via a chemical reaction to sunlight. In indoor flights, they are unable to do this. Sunlight through a window is not sufficient. The ultraviolet light needed does not pass through window glass. Full spectrum lights can help but some studies have shown that the ultraviolet is only at sufficient levels at less than one foot from the light source. For inside birds, a D3 supplement is almost always helpful.

An excess of phosphorous, can also interfere with the absorption of calcium. According to Robert Black, plant materials (like all those wonderful seeds we feed our birds, contain an abundance of phosphorous. Animal products like egg foods, insect foods and mealworm, contain an abundance of calcium. By serving both plant and animal products to our birds, we are able to keep the calcium/phosphorous ratio in balance.

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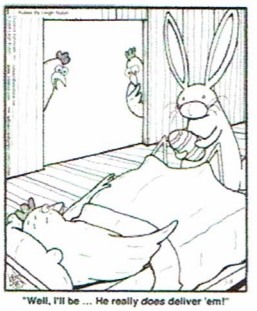
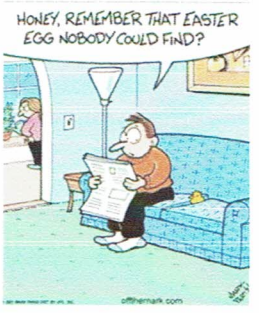
Some of those yummy greens we offer can also interfere with calcium absorption. Oxalic acid found in spinach, beet greens, chard and rhubarb reacts with the calcium so that it can not be absorbed. While these greens are rich in a number of nutrients, it is important to feed them in small amounts and provide extra calcium when doing so.

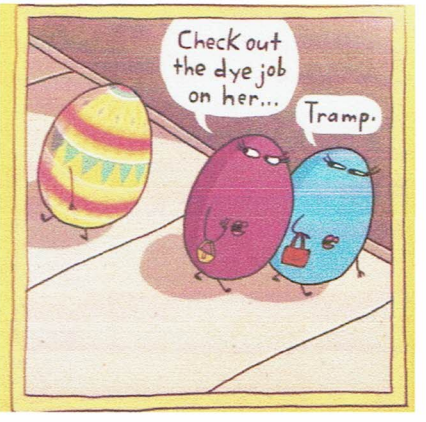
In order to pass a developed egg, the mucus membranes around the vent must be soft and flexible. It is the fat based vitamins that are primarily responsible for this condition, most notably linoleic acid (Vitamin F) and Vitamin A. Without these essential nutrients, the oviduct becomes dry and hard. Most avian vitamins do not include the fat based vitamins, so it is important to supply a separate source for these vital nutrients. These essential fatty vitamins can be found in many of the oily seeds such as safflower seed, sunflower seed, and niger seed. I have found niger seed the easiest for finches to accept.

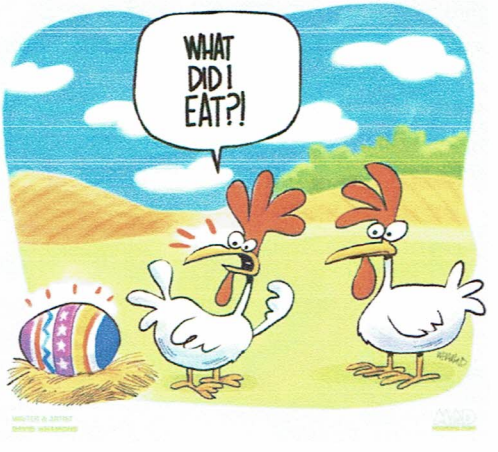
If you do have a finch suffering from egg binding there are some things you can do. First and foremost, a warm, quiet environment will allow the bird to focus it's reserves on passing the egg rather than keeping warm. An immediate increase in calcium will do nothing to harden the shell of an already formed egg but will do wonders in improving the muscle action needed to expel the egg. Calcivet by Vetafarm, provides not only the calcium, but also the D3 needed to absorb the calcium. It can be served in the drinking water or sprouted seed if the bird is still eating and drinking. If the bird has stopped eating and drinking, it can be administered directly into the crop.

Massaging a small amount of vegetable oil around the vent will help soften the mucus membranes around the vent and help the hen pass the egg. Once the egg has passed, the bird will appear to have made a complete recovery. It is now time to assess the nutritional problems that caused this problem in the first place. It is dangerous to attempt to breed this hen again until the nutritional deficiencies have been addressed.









Can Birds Lay Eggs Without a Male? Is Mating Always Necessary?

By Richard Worden

Birds' reproductive systems differ from many other animals, such as dogs and humans. Since they reproduce through egg-laying, you might wonder, can birds lay eggs without a male?

Birds can lay eggs without a male, but it isn't standard behavior. Most female birds who don't have a mate won't lay any eggs, but some will due to environmental and hormonal factors. If a bird lays unfertilized eggs often, she may become deficient in specific nutrients, especially calcium.

This article will discuss why some birds lay eggs without a male, why it can be bad for their health, how to stop birds from laying unfertilized eggs, if male birds can lay eggs, and how often birds lay unfertilized eggs. Keep reading if you want to learn more about this exciting topic!

Why Do Some Birds Lay Eggs Without a Male? Birds will sometimes lay eggs without a male due to environmental factors. These factors include:

Photoperiod. A bird may be more inclined to lay eggs if there is plenty of daylight. So, you might notice a bird laying an egg without a male during the spring or summer because there tends to be more daylight during these seasons.

Being indoors. Since there is lighting indoors, birds may mistake this for natural daylight, and it could cause them to lay unfertilized eggs.

Surroundings. Animals and objects around the bird can make it sexually stimulated, which can, in turn, make it lay eggs. For example, human touch and toys can create arousal. If a bird is around these things often, it may be more likely to lay unfertilized eggs.

Hormonal changes. Many things can cause hormonal changes, including a bird's surroundings. However, overeating is also proven to cause an increase in the production of reproductive hormones in parrots and other birds. This can increase the chances of laying an egg without a male.

Why Is It Bad for Birds To Lay Eggs Without a Male?

While it's not a big deal for a bird to lay eggs without a male infrequently, doing so too often can be bad for her health and well-being.

Continuous egg-laying without a male can lead to calcium deficiency, which can turn life-threatening if it gets out of hand. A vet may need to intervene if a bird has suspected calcium deficiency, but if it's not too bad, an increase of calcium in the diet may suffice.

The hormone changes can also affect how the bird behaves. When a bird has eggs (even if unfertilized), it becomes protective over them due to hormones, so it may become angry toward others.

Laying too many eggs without a male can also lead to egg binding. This happens when the egg gets stuck inside the bodies of birds and chickens.

How To Stop Bird From Laying Eggs Without a Male

Since you're no longer asking yourself–can birds lay eggs without a male?--you might be interested in learning how to stop a bird from laying eggs without a male.

Certain things can help a bird's reproductive system get back to normal, so check out the points below to learn more:

The removal of nesting materials in the area. Nesting materials include anything a bird can use to make a nest, like a newspaper.

Keep her away from other birds. It's only possible to do this in the case of pet birds. Of course, there's no way to keep a wild bird away from other birds. If you can keep her away, she'll be less likely to become aroused and lay unfertilized eggs.

Don't rub her. Rubbing a bird can sometimes make her become aroused, which can make her body lay eggs.

Remove any objects that may promote egg laying. Objects may include toys or other things the bird finds sexually stimulating.

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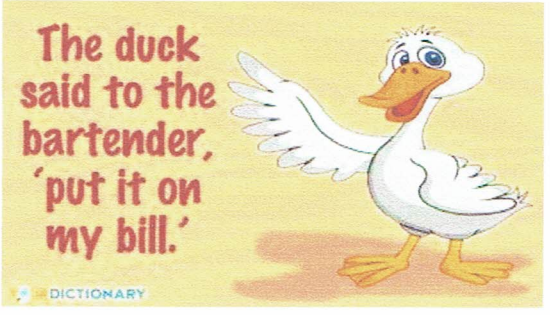
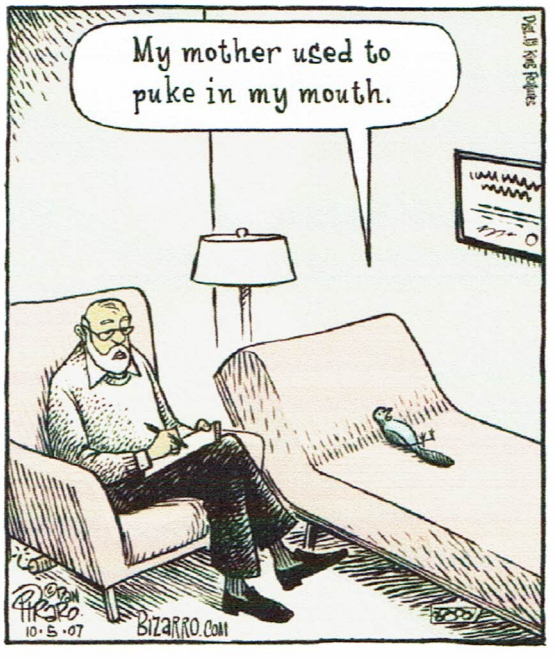
Change her environment. Birds are more likely to lay eggs if they feel comfortable in their environment. Changing it up now and then (like removing some objects and adding new ones) can cause some confusion and may halt egg-laying.

If a pet bird lays too many unfertilized eggs, a vet may intervene by giving her hormonal medication. An example of such a medicine is depo-provera (DEP), which can decrease the chances of a bird chronically laying unfertilized eggs.



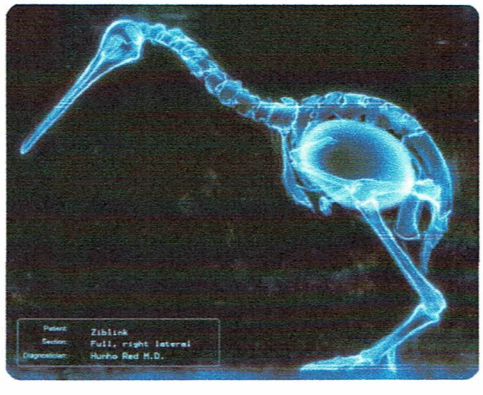


A FEW EGG RECORDS

The extinct Madagascan elephant bird (Aepyornis maximus) laid eggs measuring 13 in (33 cm) long and with a liquid capacity of 8.5 liters (2.25 US gal). The latter measurement is the equivalent of 7 ostrich, 183 chicken or more than 12,000 hummingbird eggs! The Elephant bird became extinct about 1,000 years ago and lived in the island of Madagascar, off the coast of Africa. Its eggs were the largest ever single cell to have existed on Earth.

You may have wondered: what bird lays the smallest egg in the world? The answer reveals an astonishing feat of nature. The bee hummingbird lays the smallest egg of any known bird, with eggs measuring less than half an inch long. Measuring just 2.25 inches in length and weighing only 0.06 ounces, the Bee Hummingbird is not only the smallest bird in the world, but also the smallest warm-blooded vertebrate species on Earth. Its diminutive size is truly awe-inspiring, considering that its eggs are even smaller.

What land bird lays the biggest egg for its body size? That would be the North Island brown kiwi. A female kiwi lays an egg that is 15 to 22 percent of her weight. A male then incubates the egg for 68 to 91 days. When the chick hatches, it is soon self-sufficient and won't imprint on its parents. Unlike most birds, female brown kiwis have two functioning ovaries and, unlike other kiwi species, they will lay multiple eggs per season. Below is an x-ray of a female kiwi with her egg inside. Incredible, huh?



MARCH MEETINGS

Saturday, March 9, 2024
at the Clackamas Community Center

1:30 Board - 2:00 Show Committee
General Meeting - 2:30-3:30

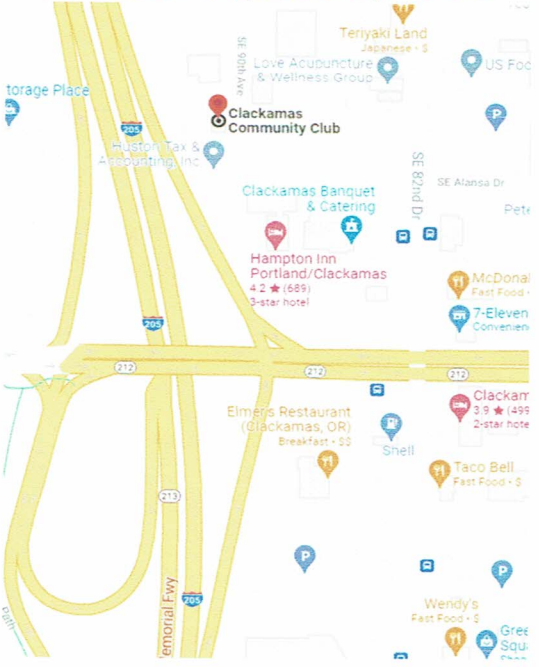
Speaker: Member Mike Dahl "Breeding English Budgies"
Important vote on 2024 show location.

DIRECTIONS TO CLACKAMAS COMMUNITY CLUB

FROM THE SOUTH: I-205 North to Exit 12 for OR-212 E toward OR-224 E/Damascus/Estacada. Use middle lane to turn right onto OR-212 E. Turn left at the 1st cross street onto SE 82nd Drive. Turn left onto SE St. Helens Street. Turn left onto SE 90th Avenue. Destination will be on the left after a right hand curve. Smaller of the two buildings. (Was once a residence.)

FROM THE NORTH: I-205 South. Take exit 12A to merge onto OR-212 E toward Damascus. Merge onto OR –212 E. Turn left on 82nd Drive. Turn left onto SE St. Helens Street. Turn left onto SE 90th Avenue. Destination will be on the left after a right hand curve. Smaller of the two buildings. (Was once a residence.)

CLACKAMAS COMMUNITY CLUB MAP
15711 SE 90th Ave, Clackamas, Or 97015



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