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Bug Jars by Vlasic: The “Hole” Story



It's inevitable, whether I am talking about an insect-related subject to families at a library, at a school, or in one of our own day camps here. When the conversation turns to keeping insects captive for observation, the collective eyebrows of all adults shoot up when I adamantly advise, *Do NOT punch holes in the jar lid!* Doing so *increases* the likelihood of killing the caterpillar or grasshopper inside.

Despite their good intentions, parents have been wrong about this for generations. Young children, ever-trusting of Mom's or Dad's superior store of experience and knowledge, accept it without question as the right thing to do. They, in turn, grow into parents who automatically iterate the ritual before handing the jar over to their own little bugger, and so on.

The standard retort concerns fear of suffocation – a definite problem for a small mouse trapped in a tightly-sealed jar, but an insect is cold-blooded. Hence, its oxygen demand is magnitudes less than a similar-sized endotherm. So, one or a few small insects in a standard peanut butter, pickle or salsa jar are in no danger of suffocation. In fact, any freshly-picked leaves kept with the insect are releasing oxygen molecules within the jar, as well.

Still, habits picked up and practiced since childhood are hard to break. For instance, during a summer camp here a child may find a caterpillar and ask to keep it. After a quick explanation of the content above I will send him or her home with it. The following day the parent drops the child off for camp with the jar, with the caterpillar, and *with* holes punched in the lid. I turn to the child and ask why the information we discussed was not shared at home. A frustrated response goes something like, “I tried to *tell* her but she wouldn't listen!” Then, the mom's sheepish explanation follows something like, “He told me, but I thought he may have heard wrong,” or “I figured I'd do it anyway because what's the harm...?”

Here's the harm... A caterpillar or any other herbivorous insect gets virtually all its hydration from the water contained in the tissues of the leaf. As we all know, a leaf which has been picked from a growing plant is severed from its water supply. If left in the open air (or in a porous container) the water in the leaf begins to evaporate. A caterpillar or other insect that eats a leaf in any state of desiccation tends toward a state of dehydration itself. Over a course of days the insect will surely reach a point of no return and ultimately die.



A larger caterpillar or other insect needs a larger jar.

On the other hand, just like lettuce or vegetables stored for our own consumption, leaves kept in a tightly-sealed container retain their water (Tupperware ads call it “freshness”) much longer than if left in the open air. Do the leaves in the sealed jar last indefinitely? Definitely not! Just check the contents of the sealed containers lost in the far reaches of the bottom refrigerator shelf. When keeping a caterpillar or other insect in the sealed jar it is a good practice to change the leaves every day or two. While you’re in there also wipe out any accumulated droppings or condensation.

Speaking of condensation, here’s a vital drawback to keeping your insect in a tightly-sealed jar, but an easily-managed one. To avoid steaming the jar’s contents you must keep it out of the sun. The temperature inside a closed jar rises rapidly when the sun’s rays strike it. Whether in the sun or not, evidence that the temperature within is exceeding the ambient temperature outside is the presence of condensation or fogging on the inside walls. When you notice this just open the lid for a minute or two to let the temperature stabilize.

If you have a caterpillar or other insect that grows large, just like keeping a fish or turtle, the container in which you keep it should be sufficiently large to accommodate it. In fact, when the caterpillars of the humongous giant silk moths that we keep here every summer reach a certain beastly proportion, we move them onto open cut branches of their given food tree with the stems immersed in a bottle of water like a cut flower to keep them fresh for the day or two it takes the caterpillars to consume them.

Finally, it bears mentioning that there are an awful lot of specifically-manufactured portable bug cages, boxes or other containers on the market geared for children who are into catching and keeping leggy, little beasts. Those made of plastic are riddled with “air holes.” Others have walls comprised of screen not unlike that found in window frames. In light of everything discussed here, we strongly advise against spending your money on them. If you are serious about keeping that bug alive-and-kicking there is no better enclosure than a good, old-fashioned, rinsed and dried pickle jar – hold the holes.

A big chunk of our Sunday, August 13 Feeding Frenzy theme involves creatures thriving in jars without holes in lids. Bring your own jar and we are confident we can find a caterpillar here for you to take home to rear and observe!



Place especially large caterpillars on a clipped branch in a water bottle.

-Jim McGrath

Feeding Frenzy

**SUNDAY,
AUGUST 13**

***Doors open from 1 to 5pm.
Admission \$5/person.***



Who doesn't love feeding time at the zoo? That's why we've set up a whole afternoon of nothing but... With over 100 hungry Michigan-native reptiles and amphibians of 43 species, plus an always-hungry red-footed tortoise, plus an array of butterfly and moth caterpillars, there will be a LOT of feeding. Throughout the day, knowledgeable staff is on hand to mingle with visitors, giving everyone up-close opportunities to watch snakes, turtles, frogs, salamanders and lizards eat a wide variety of foods – fruits and vegetables plus many kinds of small animals, including worms, slugs, insects galore, fish, frogs, toads and even mice.

- We'll provide nets for you to catch your own insects around the yard and on the trails to feed to frogs of all 13 species found in the state. Tree frogs will take one right out of your fingers!
- Feed food sticks, worms and fish to 20 aquatic turtles in small pools on the patio. Small ones will take food right

out of your fingers!

- Watch our large snapping turtle take a stroll on the lawn, then watch it chase minnows in a pool.
- Feed berries to our box turtle and tortoise.
- Learn to identify all 3 species of Michigan garter snakes then watch them eat worms, fish and frogs.
- Hold specimens of all sizes of the Black Rat Snake, Michigan's largest. Then, watch some of them eat frozen, thawed mice.
- Watch caterpillars of various butterflies and moths devour leaves of a variety of native trees.
- Bring your own jar and we will help you find and keep your very own caterpillar.
- Staff is always on hand to help visitors of all ages make the most of their visit.



See the huge, colorfully-adorned Cecropia Moth caterpillar in addition to other species, each feeding on the leaves of a particular tree or plant.

Catch Us on Coffee Break

Friday, August 18

Jim is scheduled to appear on Friday, August 18 at 9:15am, discussing a Michigan wildlife topic. The show airs weekdays from 9 to 10am on 89.7 FM. Listen live online at lcc.edu/radio/onair/ or watch it live (or later in the day at 6pm) online at lcc.edu/tv/watch. We'll post a reminder on our Facebook fan page.



Around the State in August



- ❖ ***Tuesday, August 1: 11am. MI Snakes Presentation; Charlotte Public Library.***
- ❖ ***Saturday, August 6 7:30pm. MI Insects Presentation; Hartwick Pines SP, Grayling.***
- ❖ ***Sunday, August 7: 1:30pm. MI Frogs Presentation; Hartwick Pines SP, Grayling.***
- ❖ ***Saturday, August 12: 10:30am. MI Snakes Presentation; Huron Co Nature Center***
- ❖ ***Saturday, August 19: 12pm. MI Butterflies Presentation; Leila Arboretum, Battle Creek.***
- ❖ ***Sunday, August 20: 10am to 2pm. MI Snakes Exhibit; Williamston Farmers Market.***
- ❖ ***Saturday, August 26: 9am to 2pm. MI Reptiles & Amphibians Exhibit; Red Mill, Portland.***
- ❖ ***Saturday, August 26: 11am to 2pm. MI Reptiles & Amphibians Exhibit & Presentation; Riverfest, Middlebury, IN***

Convenient Denial

Over six months in, we are all too wearily familiar with the delusional antics of the personality posing as commander-in-chief. If a news report is inconvenient to the ego or counter to the latest lie of Orange-is-the-New-President he's sure to blow the "fake news" tweet. Sad!

Speaking of fantasy, are you tired of the endless superhero movies at the theaters, yet? We are, and we've not even seen any. Take a break from the "same ol'," and catch "An Inconvenient Sequel: Truth to Power," in theaters now for a sobering dose of reality.

In the movie's trailer (https://www.youtube.com/watch?v=3ZLZeeE_4nI) this statement by Al Gore should be enough to spur everyone who has the moral courage to look beyond themselves at the looming fate of the planet to take personal responsibility now for how, and how much, they consume energy:

The next generation would be justified in looking back at us and asking, "What were you thinking? Couldn't you hear what the scientists were saying? Couldn't you hear what Mother Nature was screaming at you?"

Links for your perusal...

http://www.nytimes.com/2017/07/27/movies/an-inconvenient-sequel-review-al-gore.html?referrer=google_kp

<http://variety.com/2017/film/news/an-inconvenient-sequel-al-gore-donald-trump-1202510201/>



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