



## Supplementary Feeding for Butterflies

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Providing regular nectar sources like a butterfly garden and supplementary sources of food can be of great importance in today's environment of highly developed metropolitan areas and in rural areas where over use of pesticides and agricultural monocultures have depleted native nectar sources and host plants. Additionally, supplemental feeding can be especially important in drought years.

Not all butterflies are attracted solely to flower nectar; some readily partake of liquid from sources such as tree sap, honeydew, over ripe or rotting fruit, dung, carrion and mud. Natural sap, nectar and over ripe food contribute much needed protein to their diets, while dung and carrion provide amino acids. Many people with butterfly gardens like to add feeding stations to attract this different group of butterflies.

### **A few tips when feeding butterflies:**

Butterflies are mostly attracted to the colors red, orange, yellow, blue and purple, so using these colors in the feeders is helpful. Since butterflies taste with their feet it is important to have them come in contact with the feeding solution so that they can taste it causing their proboscis to uncurl so they can begin to feed. You may want to smear a little of the food you are using along the edge of your feeder if you have reluctant feeders.

There are three choices when making supplementary food for butterflies. The type of food you use will determine what kind of feeder you will need. The types are liquid or nectar, fruit mash, and fruit.

If you decide to use the more liquid forms, that is, the type without many fruit solids, humming bird feeders and sponges can be used. If you choose a fruit mash recipe, you will need to use a platform or saucer type feeder. A fruit feeder can be saucer, platform or suet type feeders. All of these butterfly feeders can be purchased locally, online or they can be homemade.

A liquid feeder will need to be cleaned every few days with hot water and a mild (10%) bleach solution to inhibit mold. Rinse thoroughly before refilling with butterfly nectar. Mash feeders also need to be cleaned periodically to avoid mildew and mold.

The simple syrup used in these feeders is made like that for hummingbird nectar which is typically a 4-to-1 ratio of water to sugar, however butterfly nectar needs to be a somewhat weaker solution, a 10% sugar-water solution (1 part sugar to 10 parts water) is preferred.

It should be mentioned that butterfly feeders can attract some uninvited guests. Squirrels, raccoons, possums etc. can clean out a feeding station or turn over the container if it is unprotected. If critters such as raccoons are visiting the feeder at night, you may have to remove it in the evening. If you are able to leave it out at night, try visiting it before bedtime with a flashlight in hand. You're liable to find moths at your feeder and sometimes bats.

Other insect pests are also attracted to your feeders. Ants, roaches and wasps may possibly find your feeding station and decide to stay awhile. Ants and roaches tend to be more of a problem with feeders that are on the ground and simply hanging the feeder from a branch or the eave of a house should solve the problem. Although wasps are a threat to butterfly larva, they are not usually a threat to adult butterflies. Wasps, Bees, certain types of beetles and other flying insect will occasionally visit your feeders but should not be looked at as a problem unless they swarm in such numbers that the butterflies cannot get to the food. If you feel that you have a problem you can try removing the feeder for a few days so the problem insects are forced to find a different food source.

### **Liquid feeders: Simply fill these feeders with the “nectar” of your choice.**

*Hummingbird feeders* – Purchased locally or on the internet.

*Sponge feeder* – A nylon or cellulose sponge is soaked with the “nectar” placed on a plate or in a bowl on the ground or suspended from a tree branch. A variation on this would be to soak a length of rope in solution and then string it between two objects or from a branch.

*Butterfly feeder* – These are marketed specifically for butterflies.

Following are three fast and easy recipes to produce artificial nectars. These mixtures can be used in any of the nectar feeders.

### **Liquid feeding recipes:**

#### **Recipe #1**

2 lbs of fructose (may substitute white cane sugar)  
2 cups water  
2 tsp soy sauce

Bring to a boil and let boil 2 minutes, stirring the solution to dissolve the sugars. When still warm add 2 teaspoons of regular dark soy sauce. This should be fairly thick, but pourable syrup. Pour cooled solution into empty bottles and store.

This is shelf stable because the amount of sugar in it keeps it from spoiling. Use 1 part concentrate to 9 parts water to make the nectar which translates to 1 cup of nectar concentrate to 9 cups of water. You can break it down for smaller batches.

If you live in a very dry area, consider using fructose instead of cane sugar for this recipe. Fructose is in fact fruit sugar, and almost identical to normal cane sugar in analysis except it is a little sweeter. Jam producers use fructose instead of cane sugar because it does not re-crystallize, eliminating the white crystals that homemade jam with white cane sugar can have. This is important because in very hot dry areas, unless the butterflies are getting plenty of moisture after feeding, they are much more inclined to suffer from re-crystallization of the sugar within their bodies, which can lead to an early death!

Once the syrup is made up it keeps a long time without re-refrigeration. This recipe makes a concentrated solution that you can pour a little and just dilute with water each time you need nectar for your butterflies.

### **Recipe #2**

3 oz water or Sports Drink similar to Gatorade  
1 tsp simple syrup  
6 drops soy sauce

This is a mixture of Gatorade (or any other Sports drink), soy sauce and simple syrup. Gatorade works much better than plain water. For a quick fix you can use regular white cane sugar in the short term but simple syrup works much better. Do not use honey because it can cause some problems like re-crystallizing and harboring bacteria.

To make simple syrup add 1 cup of sugar to 1 cup of water and bring it to almost a boil. Right before the water actually starts to boil the sugar/ water solution will become clear. Immediately remove it from the heat and allow it to cool.

Mix 3 ounces of water or Gatorade and 1 teaspoon of simple syrup to it. Then add about 6 drops of soy sauce. The Soy sauce adds some salts, vitamins, and minerals that are not present in pure sugars!

### **Recipe #3**

1 cup Gatorade or similar Sports Drink  
1/2 teaspoon sugar

**Note – Some people have expressed concern that the dyes and preservatives found in many of today's sports drinks could possibly harm the butterflies. Use clear Pedialyte or**

**Emergen "C" powder, both are readily available at the grocery, as a substitute for Sports Drink.**

**Mash feeders:** Mash feeders can be almost anything that is waterproof and has the ability to hold a small amount of liquid.

- Glass, ceramic, plastic or terra cotta saucers
- Platform bird feeder
- Sponges soaked in bait and hung from branch tips or even set on the ground.
- Length of rope submerged in bait and then strung between two supports.

## **Butterfly mash recipes**

### **Recipe #1**

4-6 rotting bananas  
About 8 ounces of molasses  
2 cups of brown sugar,  
3-4 scoops of powdered Gatorade mix or Emergen" C"  
1-2 cans of cheap beer

Mix thoroughly in a covered pail, allow to ferment for a few days, and then put it on your feeder.

### **Recipe #2**

1 pound sugar  
1 or 2 cans stale beer  
3 mashed overripe banana  
1 cup of molasses  
1 cup of fruit juice

Can be used immediately, but is most effective if left to ferment: add the bait to a container, DO NOT tighten the lid and place in the garage for a day or two, then put on you feeder.

### **Recipe #3**

One can of beer (or apple cider)  
1 1/2 cups sugar  
1/4 – 1/2 cup molasses  
4 over-ripe bananas or the equivalent amount of apples, peaches, pears, quinces, etc.  
A brewer's yeast tablet (optional)  
1 spoonful of cornmeal (optional)

Mix the ingredients with a blender or hand mixer, and then allow fermenting in a warm slightly vented container for a few days. Do not store bait in a sealed glass container—it can explode from gas pressure. Good bait will smell strongly of alcohol.

Apply the bait to tree trunks or in a feeder. If you use trees, select trees with smooth bark or plates of smooth bark. Pines, hickories, cherries, and birches are all good. Corky or absorbent bark (like White Oak) is best avoided.

#### **Recipe #4**

One gallon jar with lid  
fruit (8-10 bananas, the riper the better, or the equivalent amount of apples, peaches, pears, quinces, etc. can be used in various combinations; do not use fibrous peels such as bananas peels and cantaloupes rinds)  
2 cups white sugar  
2 cans of beer (for some reason, lite beer does not work well)  
2 tablespoons powdered Gatorade

1. Place 1 cup of sugar and half the fruit in a blender; fill with Gatorade, blend well, then pour into the gallon jar.
2. Repeat with the rest of the sugar and fruit.
3. Pour the 2 beers into the gallon jar.
4. Use the Gatorade to make the mixture one full gallon.
5. Mix well with a spoon.
6. **Place the lid on the jar loosely** (if you tighten the lid, the mixture may cause the jar to break as it ferments).

The finished product can be stored at room temperature (you may wish to set it outside unless you love the smell and it will work for weeks). To use, simply pour some bait in a shallow dish and place it where ever you wish and enjoy watching your butterflies and moths!

#### **Fruit feeders:**

A ceramic or glass pie plate, platform bird feeder, plastic or terra cotta plant saucer, or dish with a sloping rim can all be used to make easy butterfly feeders. Suspend the plate with flower pot hangers or fashion a macramé style holder from household twine. Just about any fruit will do but a little experimentation may be necessary.

#### **Fruit feeder tips**

Take one very ripe banana with the skin on, mush it a little, poke a few holes in it or make a shallow slit down the length of the banana with a knife to open it up slightly. Place the banana on your feeder and then pour a little Gatorade or emergen”C” powder over the top of it . When using oranges or other citrus, be sure to make cuts across the grain so that the butterflies can

reach the juices. It is helpful to cut off 1/8 of an inch below the previous cut every day or so to reopen the membranes so the butterflies can get to the juice. This can also be done with a fork.

**Commonly used fruits:** These can be used in their fresh state but over ripe or rotting fruit is preferred. Not surprisingly, fermenting fruits also draws moths, sometimes in large numbers.

watermelon  
pears  
peaches  
persimmons  
figs

cantaloupe  
peach  
nectarine  
pineapple  
plums

strawberries  
bananas  
apples  
pear  
oranges

**The suet feeder** – The wire suet feeder used all winter to feed the birds can be used to place slices of fresh or rotten fruit instead of suet. This isn't as effective as a plate because the fruit won't turn to goo, which butterflies prefer, but it is sometimes effective.

## **Puddling**

Flowers are butterflies' main source of food, and since there are not a lot of nutrients found in flower nectar, male butterflies of most species land at the edge of a wet area and feed on essential salts and other nutrients found in the sand or mud. By sipping moisture from mud puddles, butterflies take in salts and minerals essential to reproduction and other functions. When butterflies mate, the nutrients are transferred to the female and these extra salts and minerals improve the viability of the female's eggs, increasing the chance of passing on their genes to another generation. This behavior is known as "mud puddling" or just "puddling" and providing this type of area will be a beneficial addition to your butterfly garden.

## **Creating a Puddling Area**

Here are a couple of ideas for creating puddling areas in your garden. If you have a dirt driveway or a fine (small) gravel walkway such as decomposed granite in your garden, sprinkle rock salt, crushed pellets used in water softeners or even better crushed pieces of a mineral block used for cattle and deer, and water them into the gravel or dirt. Remember that too much salt can contaminate the soil.

An alternative puddling area that will not contaminate the soil is to put the sand, gravel or mud into some kind of container. These can be placed above the ground or sunk at ground level.

### **Puddling area ideas:**

1. Create a Puddling box: mix ½ cup salt with 1 gallon of sand, pour into a waterproof box and keep moist.

2. Place coarse sand in a shallow pan and soak with Gatorade and then insert the pan in the soil of your habitat. Be sure to keep the sand moist.
3. Use a small dish with some mushroom compost; keep damp with water.
4. A damp sand patch, baited with a small amount of manure, fermenting fruit such as bananas or cantaloupe, or ripe fish will attract butterflies.
5. Permanent puddles are very easy to make by burying a shallow bucket to the rim, filling it with gravel or sand, and then pouring in liquids such as stale beer, sweet drinks or salt water. Some butterflies also like dung and urine which can also be added.

### **Partial list of Austin area butterflies that will visit your butterfly feeders:**

Red Admiral  
Morning cloak  
Hackberry Emperor  
Goatweed Leafwing  
Question Mark  
Painted Lady  
Snout butterfly  
Comma

### **The information for this guide came from these resources:**

#### **Internet Links**

<http://www.xerces.org/>  
<http://www.wildflower.org/> - UT (Ladybird Johnson) Wildflower Center  
<http://www.naba.org/> - North American Butterfly Association  
[http://www.tpwd.state.tx.us/huntwild/wild/wildlife\\_diversity/wildscapes/](http://www.tpwd.state.tx.us/huntwild/wild/wildlife_diversity/wildscapes/)  
<http://www.texas-butterflies.com/butterfly-basics.htm>  
<http://www.texas-butterflies.com/butterfly-links-resources.htm>  
<http://www.thebutterflysite.com/texas-butterflies.shtml>  
<http://www.meetup.com/ABForum/> - Austin Butterfly Forum

#### **Books**

Butterfly Gardening for Texas by Geyata Ajilvsgi  
Butterfly gardening for the South by Geyata Ajilvsgi  
Butterflies of Houston and Southeast Texas by John L. Tveten, Gloria Tveten  
The Butterflies of North America by James A. Scott