



Audubon CALIFORNIA

KERN RIVER PRESERVE

FEEDING HUMMINGBIRDS



Choosing Feeders: Choose feeders that are easy to clean such as the "HummZinger," Perky-Pet's Model 221 "Hummingbird Oasis," or the Droll Yankee Model L-F. It is essential that the feeder comes apart so that you can clean all surfaces thoroughly.

Both the "HummZinger" and "Hummingbird Oasis" feeders have moats in the middle to hold water to keep out ants. Another feature of these feeders is they provide unobstructed views of hummingbirds at all feeding ports on the feeders.

PERFECT HUMMINGBIRD FOOD RECIPE

Hummingbird Food Recipe: One part sugar to four parts water. Stir until sugar is dissolved. Measure examples: One cup of sugar to four cups of water, or 3/4 cup sugar to 3 cups water or 1/2 cup sugar to 2 cups of water.

Bring solution to a boil to kill bacteria and slow spoilage - allow to cool. Fill feeders just enough for a day or two of use. Extra solution may be refrigerated if used within one week.

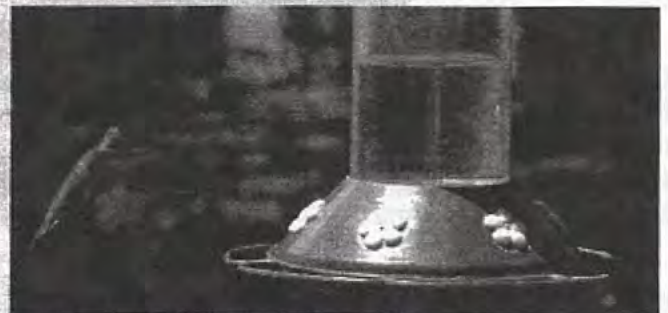
Caveat: If feeders are **cleaned** and filled with **freshly-made**, hot water, sugar solution **every day**, then it may not be necessary to bring the solution to a boil. If you plan to store solution for two or more days, boiling is a must.

NOTES: Adding red food-dye coloring is unnecessary. The red on a feeder is enough to attract hummers. **DO NOT USE HONEY** as this can kill hummingbirds.

Putting out a feeders to attract hummingbirds, who need to feed frequently, especially during migration, is a very popular activity. However, using the wrong kinds of sugar solutions or leaving moldy feeders out can kill hummingbirds and their babies.

Bottom Line: Keep your feeders CLEAN, CLEAN, CLEAN!!!!

Cleaning Feeders: Change the sugar solution often. **Clean and put only enough fresh sugar solution in your feeders to last one to two days** in warm weather, or sooner if it looks cloudy or develops mold. Keeping feeders in the shade slows down fermentation and mold growth. But, feeders placed in the sun are more easily seen and seem to attract more individual hummingbirds.

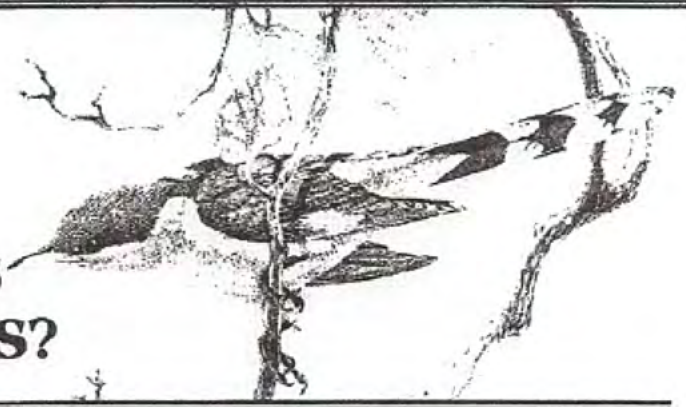


Use only vinegar and water to clean feeders. Soap or bleach traces left in feeders, even after thorough rinsing, can harm hummers. A specially designed sponge or brush can help. If you use bleach as a last resort, follow-up by cleaning the bleach out with a vinegar and water solution.

For a wide selection of hummingbird feeders visit,
http://www.withoutbricks.com/estore/products.asp?dept_id=2001&affiliate=natureali.

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HOW MANY HUMMINGBIRDS ARE VISITING THE FEEDERS?



The question is often asked, "How many hummingbirds do I have coming to my feeders?"

The following information is intended to give you a "feel" for the numbers of hummingbirds coming to your feeders. You may find there are often many more hummingbirds present at your feeders than might be thought. Some caveats to keep in mind are:

- Not all hummingbirds are Black-chinned Hummingbirds.
- Not all hummingbird individuals or species are the same size which may impact sugar solution intake.
- Not all hummingbird species or individuals are known to drink the same amount of sugar solution.
- The length of the feeding day differs depending upon latitude and longitude.
- Feeding rates and consumption may vary depending upon temperature and other weather related factors.
- Migrating hummingbirds may require more food than non-migrating hummingbirds.

Ruth Russell, Tucson Audubon Society, passes this information on from her husband Steve who has conducted hummingbird research in Southeast Arizona for years.

"...one gallon of sugar water will feed approximately 750 hummingbirds the size of Black-chinned Hummingbirds for one day. That's assuming you have no orioles, finches, woodpeckers, etc. in the day and no bats at night. This is based on energetic studies done by Bill Calder..."

Black-chinned Hummingbird Unit (BCHUs) Equivalencies based on several standard hummingbird feeder sizes:

1 liquid ounce consumed per day = 5.859375
BCHUs

8 oz = c. 47 BCHUs

16 oz = c. 94 BCHUs

30 oz = c. 176 BCHUs

48 oz = c. 281 BCHUs

96 oz = c. 563 BCHUs

128 oz (1 gallon) = 750 BCHUs

The Kern River Preserve is one of the top hummingbird migration stops in the United States. Based on hummingbird sugar water solution consumption of up to 450 ounces per day, Kern River Preserve feeders host over 1500 individual hummingbirds each day in the second half of July, throughout August; and into early September; peaking at over 2500 individuals per day.

In addition to sugar water consumption, banding hummingbirds helps give a feel for numbers present. Ninety-two hummingbirds (46 Black-chinned, 46 Anna's) were banded at two Kern River Preserve feeders by Donald Mitchell and Paul Mason on Sunday, June 29, 2000. Their foreheads were plainly marked with blue fabric paint. The marked birds were but a fraction of the total number of individual hummingbirds visiting Preserve feeders that day, evening, and next day. Repeating the same procedure on Sunday, August 6, 2000, one hundred hummingbirds (15 Black-chinned, 21 Anna's, 60 Rufous, 4 Allen's) were banded by Don and Paul, yielding the same results.

Long-standing hummingbird aficionados feeding in Arizona, California, New Mexico, and Texas have up to an estimated 3000-4000 individual hummingbirds visiting their feeders each day during the height of fall migration. A man in Nogales, Arizona, reached a level of providing eighteen gallons (*Editor: 2304 oz. or 13,500 BCHUs*) per day which could have meant over 10,000 hummingbirds visiting his feeders each day.



BLACK-CHINNED HUMMINGBIRD
RUFIOUS HUMMINGBIRD



ANNA'S HUMMINGBIRD
ALLEN'S HUMMINGBIRD



COSTA'S HUMMINGBIRD
CALLIOPE HUMMINGBIRD

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KERN RIVER PRESERVE
HUMMINGBIRD GARDEN



By planting a hummingbird garden, you can enhance the beauty of your home and provide a food source for hummingbirds and butterflies.

If you live outside the Kern River Valley, check with your local nursery for plants that attract hummingbirds and butterflies in your area. Kern River Valley gardeners may check the nursery at Lake Isabella True Value Hardware for plants and advice on planting a Hummingbird & Butterfly Garden.

There are several books out on Hummingbird & Butterfly Gardens. **For recommended books, go to <http://www.hummingbirds.net>**

Three Basic Principles:

1. Place plants in several locations.
2. Plant clusters of the same species together.
3. Plant flowers with different blooming times to provide nectar throughout the seasons.

Here is a selection of plants to try in your garden:

California Natives

Western Columbine (*Aquilegia formosa*)
Manzanita (*Arctostaphylos* sp.)
Desert Willow (*Chilopsis linearis*)



Bleeding Hearts (*Dicentra formosa*)
Bladderpod (*Isomeris arborea*)
Scarlet Gilia (*Ipomopsis aggregata*)

Cardinal Flower (*Lobelia cardinalis*)
Monkey Flower (*Mimulus* sp.)
Indian Pink (*Silene californica*)
Woolly Blue Curly (*Trichostema lanatum*)
Zauschneria [aka California Fuchsia] (*Zauschneria californica*)



Non-native Hummer Plants

Hollyhock (*Alcea rosea*)
Borage (*Borage officinalis*)
Bottlebrush (*Callistemon* sp.)
Fuchsia (*Fuchsia* sp.)
Sweet Pea (*Lathyrus odoratus*)
Rosemary (*Rosmarinus* sp.)
Nasturtium (*Tropaeolum majus*)
Autumn Sage (*Salvia greggi*)