
SEDUCED BY FIGS

BY CARRIE CLOUGH



I know it is late summer or early fall when figs begin to make their official appearance at the farmers' market. Their deep purple, pale green, violet and burgundy hues lengthen the color spectrum as California shifts a little further from the sun. To me, the fig is an emblem of our Mediterranean clime, even though there are some fig varieties that grow in tropical and subtropical regions. For hot, dry climates, however, I think the fig represents a cooling, sweet sensuality that is nothing short of a miracle.

The figs we eat are from the species *Ficus carica*, which belongs to the *Ficus* genus of more than 850 species and is a member of the *Moraceae* Family. Mulberries and breadfruit are also part of this family, which gives you an idea of how diverse the *Moraceae* family is.

The common edible fig cultivars we know and love, like Black Mission and Brown Turkey, are self-pollinating. They have been cultivated for sweetness and size and are the most dominant figs available at farmers' markets. The figs that are wasp-pollinated, however, are unique both in flavor and design, and something to be sought after. Calimyrna, Smyrna or the unforgettable Kadota figs are all wasp-pollinated.

The fig wasp is about the size of an ant and each fig species is pollinated by one fig wasp species, which can make pollination tricky. This wasp pollination process is where the true magic and mystery of the fig begins.

First, let's explore how the edible fig is really the flower of the *Ficus carica* plant and not the fruit.

What we consider to be the fruit of the plant is actually what is called an adapted inflorescence: a receptacle (in this case, it is actually called a modified stem, or *peduncle*) containing an arrangement of multiple flowers. For those unfamiliar with botany, the receptacle is the part at the base of a flower that contains the ovaries (the little knobby part below the petals, like a rosehip, for example). So figs, rather than developing a flower *from* the receptacle, actually form hundreds of florets, or inflorescences, *inside* the receptacle! It all sounds very technical, but once you get familiar with the terms, you can visually understand how pollination in this design is incredible.

Unlike plants in the Rose family (including apples, plums

and peaches), which have distinct flowers that are pollinated by bees, figs require the fig wasp to enter the receptacle (called the *syconium*) through a small opening at the base called the *ostiole* (the little hole you see at the bottom of a fig). Since the female fig wasp is so small (and I should clarify that fig wasp pollination, as well as honey-

bee pollination, is performed by females), she can easily maneuver her way inside the fig and find a safe, womblike environment for her eggs to hatch.

The female fig wasp pollinates the stigmas, or the female parts of the florets, and lays eggs in the ovules of some of the florets; however, not all of her eggs will be fertilized as more of the fig ovaries will be fertilized instead. (This is what we see when we slice open a ripe fig: hundreds of fertilized seeds.) Once she is finished laying her eggs, she begins to die and the enzymes inside the fig absorb her body. Female fig wasps only live for two to three days, and male fig wasps have even shorter lives.

The wasp larvae feed off of the endosperm tissue in the ovaries and reach maturity in anywhere from three to 20 weeks. Once they have reached maturity, the wasps chew their way out of the ovule and move into the fig cavity. Here, the young male wasps mate with the young females before chewing a hole in the fig wall to allow the females to escape. The males die soon afterward and are absorbed in the flesh of the fig. Then the cycle continues. This is partly why figs rarely ripen at the same time.

This process is also similar to honeybee mating: The male bee's only function is to breed and then die. Breeding is, of course, a crucial part of the cycle, but knowing that females (with insects as well as plants) are at the helm of most of our food production is an important detail to note.

What an incredible process! This relationship is what is called *obligate mutualism* in biology, which means that both the fig wasp and the edible fig tree could not survive without the other. We might also call this *symbiotic*. This is a relationship that has evolved over the last 60 or so million years.

For those of you concerned that you are ingesting dead wasps when you eat figs like the Calimyrna and the Kadota, relax in the knowledge that the luscious, rare treat you are

eating would not exist without those wasps (they are also completely harmless and don't harbor any diseases). This is yet another reminder of how dependent we are upon many insects and how essential they are to life on earth.

Besides their seductive and incredible flavors, figs are remarkably nutritious. They are high in calcium and also contain magnesium, potassium, B vitamins, vitamin C, copper and phosphorous.

Figs can eliminate pathogenic bacteria and roundworms in our bodies with a sulfuric compound called *ficin*. This compound is also good for reducing arthritic pain and chronic inflammation. They are also good for the thymus gland and the immune system.

In the late 1970s, Japanese scientists discovered a chemical in figs called *benzaldehyde*, which is very effective in treating cancerous tumors. Benzaldehyde also occurs in large amounts in Shiitake mushrooms, which are also highly effective in treating cancer.

According to John Heinerman, a medical anthropologist and author of the great book *Heinerman's Encyclopedia of Fruits and Vegetables*, figs are used in parts of Africa and Central America to clean teeth. Rubbing the cut side of a halved fig on enamel for several minutes cleans teeth of bacteria and other pathogens.

Figs are delicious in desserts, but I also love them in savory dishes. The recipe below can also be used as a sauce for grilled meats, on pizza with caramelized onions and Gruyere, or spread on sandwiches and *panini*. If you can find some fresh Kadotas or Calimyrnas, make sure to save a few to be eaten raw. It is an experience like no other.

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This is a good fall recipe incorporating roasted root vegetables and figs. The volume here is large enough to serve as an hors d'oeuvre for a party, but you can always scale it down to suit your needs.

ROASTED ROOT VEGETABLES WITH CARAMELIZED FIG AND SHALLOT SAUCE

Vegetables

(coarsely chopped into 1-inch pieces)

- 4–6 carrots
- 4–6 turnips
- 4 sweet potatoes (skins on or off)
- 4 yams
- 2–3 tablespoons olive oil
- 1–2 cloves minced garlic
- Sea salt and fresh-ground pepper
- Toothpicks

Preheat oven to 350°. Place cut vegetables in a large bowl and toss with olive oil and minced garlic and season lightly with sea salt and pepper. Spread evenly on parchment-lined baking sheets (you might need 3 or 4 or just do it in batches) and bake for 20–25 minutes or until vegetables are tender and a nice golden brown. Cool to room temperature.

Caramelized Fig and Shallot Sauce

- About 8 fresh *very ripe* organic figs, sliced in half (Black Mission figs work well here if you can't find Kadota)
- 6 shallots, minced
- 1 tablespoon olive oil
- 3–4 tablespoons balsamic vinegar
- 1/3 cup water (or more if needed)
- Sea salt to taste
- Minced parsley and chives for garnish

Preheat oven to 350°. Place sliced figs, cut side up, in an even layer on parchment-lined baking sheet. Drizzle with balsamic vinegar and a little olive oil and bake for 25–30 minutes or until figs are deeply browned, slightly bubbly and caramelized (not burned, however, so you may have to monitor them).

While the figs are caramelizing, sauté shallots in olive oil, stirring constantly, until soft and slightly caramelized.

Place figs and shallots in blender with the 3–4 tablespoons balsamic vinegar, 1/3 cup water (or more if needed to make a smooth sauce) and sea salt to taste. The sauce should be a nice blend of sweet, tart and just enough salt to bring out all the flavors. Cool to room temperature.

Place sauce in a large bowl (there will be extra sauce most likely) and toss vegetables with minced herbs and place on large platter. Have toothpicks on the side of the platter or, if you have the time and inclination, skewer one or two pieces of roasted vegetable on each toothpick and arrange on the platter with the sauce in the middle. You can also garnish the sauce with some of the minced herbs for color.