

# Presidential Pearls

## On Flies, Mites, Cleaning Cages, Urticating Hair & Baldness

Stanley A. Schultz  
Calgary, Alberta Canada

*Noel Knight wrote: Hey Stan! Just how often should one clean one's cages?*

Everybody has a different idea. I use the rules:

Don't clean it more than once a year unless:

- 1: If it stinks, clean it.
- 2: Clean it when the tarantula molts.
- 3: Clean it if you think it's got vermin.

In nature, no one cleans their burrows, except once in a while, they excavate it a little more to enlarge it or remove dirt that sifts in (thus tending to fill it in over time) and occasionally to remove a shed skin.

From this we can extrapolate that in captivity there is no need to clean their cages unless there is some demonstrable reason to do so.

Sam Marshall (Tarantulas and Other Arachnids) believes that too much commotion (e.g., cleaning, handling, etc.) will put stress on the tarantula and this may be bad. Although we differ somewhat with him on exactly where the line defining "too much commotion" should be drawn, we generally concur. You should not clean the cage any more often than necessary.

On the one hand, these animals would not have survived as long as they have if they were emotionally or physiologically fragile. On the other hand, the failure of several species to breed in captivity could in part be blamed on the stress of living in an artificial environment.

Generally, the successful breeding of a captive animal is considered to be a sign of "everything's okay," that they've adapted well to cage life and are not under any great deal of stress, physiological or

emotional. Too frequent cleaning or fussing would only increase that stress level.

Note 1: Sam is very careful to define this as *physiological* stress, not emotional stress. We know nothing about their emotional state or stress. We can deduce a few things about their physiological stress, however, from the way they behave (or fail to behave.)

*Another person asked: Why do tarantulas get bald patches on their abdomens? My big South American burrower has a good sized bald patch on her abdomen. What is the significance of this?*

No significance whatsoever. All it means is that something (e.g., the tarantula's back legs, your hand, the roof of the burrow, etc.) has rubbed the urticating bristles from the top surface of the spider's rear end.

It doesn't mean that it's been a long time since its last molt. It doesn't mean that it's about to molt soon. It doesn't mean that it's old. It doesn't mean that it's sick. The most that can be said is that it means that the tarantula in question is probably a New World species since Old World tarantulas do not possess urticating bristles (although some Old World tarantulas have been observed with hair missing, not urticating hair, from the dorsal abdomen).

If it's going bald because you're handling her a lot, you will know by the itchy palms of your hands.

*The question of how many predator mites should be released in a mite infested tarantula cage came up; Stan answered:*

The actual number is not really

important because you can't tell how many are in the vermiculite they're shipped in and there's no way to tell how many you're going to need in the first place. We sprinkle about two tablespoons full of mite laden vermiculite in each cage that we think needs it. In a really heavy infestation, you might double the dose.

By the way, these are good things to add to house plant's pots and even outdoor garden plots. They occur naturally in many areas, but their numbers rise only after their prey population has reached high levels. Dosing your plants early will introduce large numbers of predatory mites while the pests are still on the low side of their upward population explosion. In theory, at least this will put a real damper on the pests' reproductive frenzy.

Once you've introduced them to your cages, flowers pots and garden plants, there will always likely be a residual population of just a few that manage to survive starvation, cold, cannibalism, etc. As time passes, and you periodically inspect your cages and plants you'll occasionally see a few crawling over the substrate or dirt. Keep track of where you saw them. If you detect an outbreak of the bad mites in a given cage, spoon a half cup or so of substrate or dirt containing predatory mites from the seed cage into the infested one. With any luck this will introduce enough predatory mites into the infested cage and they'll clean it up for you without any additional cash outlay.

*Another person asked the age-old question about their tarantula not eating, in this case an Costa Rican zebra.*

There are all sorts of reasons why a tarantula may not eat for a time. If you're living in the Northern Hemisphere, or if you're living in the Southern Hemisphere and very recently received the *Aphonopelma seemanni* as an import from

the north, it's about time for it to molt. Unless you've had a lot of experience with tarantulas you may not recognize the often subtle hints of an impending molt. I wouldn't worry about it until the end of April.

If it obviously is doing poorly before then, get back to us. Otherwise, try it every two weeks with one or two crickets. If it doesn't eat overnight, take them out and feed them to something else.

Much more important than food is water. Tarantulas can go for months without food if they have to. Tarantulas in a cage need constant access to water. Always make sure that it has a water dish with a chip of slate or a large pebble in it. The slate/pebble is for the crickets that jump into the water dish and would otherwise drown.

*I have an infestation of those little flies in one of my terrariums, and I need tips to eliminate them without changing substrate if possible.*

Sorry to be the bearer of bad news, but you may have a really tough problem here.

There are generally two types of small flies that may commonly infest tarantula cages.

1. Fungus gnats (*Mycetophilidae*) and darkwinged fungus gnats (*Sciaridae*). These are very small, black-colored flies that normally reproduce in moist soil. Most are about the size of mosquitoes. They're common in the pots of house plants. They require moist soil to breed, so the best way to control them is to dry the tarantulas' cages out as much as possible and rely on water dishes as a source of water for your pets. (But see NOTE 1, below.)

If you keep house plants, there's little that you can do, you'll always have them. Far away from your tarantulas and scorpions, you can drench the house plants' soil with a water soluble **non-**

**volatile** insecticide solution to kill all the maggots that are currently in the soil, but the living flies will be back next week to lay more eggs after the insecticide disappears. The editor has been known to go after the adult flies with rubbing alcohol in a quart-size squirt bottle. This may help control the adults a bit.

2. Humpbacked flies (Phoridae). These are small or minute flies about the same size as mosquitoes, usually dark brown in color. These have a peculiar way of walking or flying, first one way, then another, that gives them one of their names. Some of these probably came into the hobby as commensals on certain species of giant tarantulas from South America, mostly genus *Pamphobeteus* and *Theraphosa*. Many species are also known as commensals on ant and termite species. Other species are attracted to decaying organic material and fungus, as with the fungus gnats. Still others are internal parasites of various insects.

On commensal species, the maggots live in the crevices between the plates on the tarantula exoskeleton, waiting for the host tarantula to begin feeding. At that time they (presumably) move to the mouth area and help themselves to the pre-digested slurp from the tarantula's spit ball (food bolus). After several feedings, they will have grown large enough to leave the tarantula, pupate in the substrate and later emerge as adult flies. They mate and the females then seek out tarantulas to lay their eggs on, and the whole cycle goes around again. Under ideal conditions they apparently can have a life cycle as short as 10 or 12 days.

This is not the whole story however. They have been reported to be able to go long periods of time without food, merely "hangin' out" on the tarantula, waiting for it to finally score another meal. Thus, their life cycle isn't locked into any strict time

period. You probably can't starve them out by removing food from the tarantula unless you do so for months at a time. That's generally not considered good tarantula husbandry though.

Some species will also breed on food that isn't associated with a tarantula. Dead, ripe crickets in a poorly tended cricket cage are ideal for them to lay eggs on, for instance. So is moist garbage (e.g., fruit trimmings, meat drippings) in your kitchen garbage can. They seem to be attracted to moist areas, like around the kitchen or bathroom sinks. Also, some seem to be attracted to bright white surfaces like book pages instead of a newspaper.

Lastly, we have seen some species infesting certain other species of tarantulas. Sometimes, they were benign, just as with the giants. Other times they were clearly eating their host alive. We presume that as long as the maggots are well fed they leave their host alone. However (again we presume), when the maggots get really hungry they fail to differentiate between their adopted, wrong species, host and the spit ball they normally feed from. Food is food regardless of what it looks like.

You can reduce the number of phorid and other flies in your collection by instituting rigorous house cleaning practices but you will never be able to get rid of them. Empty the kitchen garbage pail every other day. Clean all the tarantula's cages really well, replacing all substrate (sorry guy, but you really have to do this). Don't allow any dead crickets or spent spit balls to set anywhere. Maintain dry cages wherever possible. (Again, see NOTE 1, below.)

We order in 1,000 crickets a week to feed our collection. They're dumped into a 29 gallon (110 L, 30 X 76 X 45 cm) aquarium with wheat bran flakes sprinkled liberally on the bottom as a combination food and substrate. The crickets are given

orange quarters as a source of moisture and additional food. The flies are particularly attracted to their cage. So, as a fly eradication method, we normally clean all the dirty bran flakes and orange sections out of the cricket cage (ideally) every second evening. The cleanings are placed in a small garbage pail lined with a plastic bag and this is set very close to the cricket cage. At this point we do not give the crickets any oranges and the lights are turned out for the remainder of the night.

The next morning we turn the lights on and allow the garbage pail to set an extra half hour or so to allow any flies we've disturbed to return to the pail. Then we sneak in and quickly tie up the plastic garbage bag, shaking it slightly all the while, to trap as many of these flies as possible. The whole bag is then unceremoniously, immediately escorted out the door into the garage. Then the crickets are given their orange quarters.

We've tried using the coiled, sticky, fly strips that you can hang from the ceiling, but they're almost worthless. Oh yes, they do indeed catch lots of phorid flies, but the flies' reproductive potential is such that the fly strips are all but useless anyway.

As far as I know, there is no way to eradicate phorid flies short of getting rid of all your tarantulas for several months, then starting over again with a completely new, fly free, collection.

*Kirsten Hainstock wrote: I was recently in a pet store and they had a couple tarantulas there. One actually was correctly labeled (at least the common name) but the other was hiding and the name they stuck it with confused me. They called it a steely blue. Any idea what the Latin name of this could be?*

If it was a nearly or absolutely jet black tarantula that looked just a bit leggy it very

likely could be (note all the qualifiers) a Bolivian blueleg tarantula, *Pamphobeteus antinous*.

These are big spiders. Care for them using the normal dry cage with a water dish with the mandatory slate chip or rock for the crickets. It will eat lots of crickets and enjoy the occasional pinky mouse. Be careful that they aren't given a lot of headroom. These will climb, fall and kill themselves if given the chance. A good rule of thumb is not to give them more room between the substrate and the cage's top than their outstretched leg span (from the Concise Care Guide, etc.). If you want to give them a place to hide, I suggest using a slotted plastic water pipe. See:

**[www.ucalgary.ca/  
~schultz/errata2.html#p119](http://www.ucalgary.ca/~schultz/errata2.html#p119)**

for details.

They can be a bit jumpy but seldom try to bite. Will occasionally bare their fangs when first picked up, but by the fourth or fifth time, they won't waste the effort. Although these are amendable to handling and nowhere as vicious as they're put up to be, they apparently don't enjoy being picked up as much as a *Brachypelma smithi* or *Brachypelma emilia*. Unless you've had some instruction or practice picking up big tarantulas, I'd recommend that you either be really careful when doing it or just leave it in its cage and be nice to it.

Qualifying the "be really careful" part: Sit on the floor, on a carpet if possible. Never lift the tarantula more than 30 to 45 cm (12 to 18 inches) off the floor. Use the "cupped egg" system rather than any other. See page 136 and following in the Guide for specifics.

Several words of warning that are really not words of warning (do I confuse you?): Like most large tarantulas, these have

pretty stout spines on their rear legs. One of their defenses is to erect these spines as you try to pick them up. The result is one or more pricks in your hand that can catch you by surprise. On this species, these spines are big enough to penetrate surgeon's latex gloves! Just be careful not to drop the tarantula! Don't panic. You'll survive!

Getting stabbed by those spines can also result in an impressive rash if you're sensitive to them (I'm getting that way). Get a small tube of 0.1% ELO-COM creme from a drugstore to put on the rash. In Canada, you'll need a prescription for this from your family doctor.

Speaking of spines, their urticating bristles are only moderately irritating to most people. Take the usual precautions about not getting them in your eyes. Try not to waft them into the air as you work in the cage. Wash your hands after touching the tarantula or anything in its cage. Use a cortisone creme (above) if you develop a rash. This is all just normal, common sense stuff that every tarantula keeper should know by instinct by now.

Also, when you first try to pick them up, because they tend to be skittish, they may panic and bolt in whatever direction they're facing, sometimes at you, sometimes away. This behavior has been interpreted by some as a full face, frontal attack. It isn't. The tarantula can't see you well at all, doesn't know who you are or what your motives are, interprets you as a predator, and is merely trying to escape. It'll settle down with time. Don't panic. If you panic you're likely to hurt the spider. Again, unless you've had practice picking up big tarantulas already, I'd keep it like I'd keep a large tropical fish. Nice to look at, not for touching.

Are they aggressive? Not in the least. Being predators, they know what being eaten is all about and are a little nervous.

That's all.

Are they dangerous? Don't know. We handle ours often, but have never been bitten by one. Mostly they're all bluff. Can't be all that bad though, people aren't dropping like flies from their bite.

How long do they live? Decades.

How big do they get? As a guess, 10 cm body length, 20 cm leg span (4" X 8"), 80 grams (3 oz.+).

Keep the cat away from the cage, for the cat's sake!