

Spring Could Be Here....Really

By Nancy Moore, KHA, CKK

Now that it is April, we need to focus on getting our ponds and koi through the end of winter and into spring, though as I write this, it is hailing like crazy, so I guess March is "going out like a lion." Here's hoping for some nice weather by mid-April.

Our ponds are warming up, and we need to pay particular attention to our water quality and our koi.

1. If you haven't done it in awhile, now is the time to test the pond's water parameters. Especially look at KH, or carbonate hardness, possibly the most important test right now. Why? We definitely want our pH to be stable, and that's what a carbonate level of 80 ppm or higher will do. Let's say the water changes have been infrequent, and we've had lots of rain, which is on the acidic end of the scale. Let's say the pond pH right now is 7.0 or 7.2 (which is much lower than most of the city water used for water changes). If the pond water isn't buffered (KH of 80 ppm or higher), the early morning pH could be 6.6 and the later afternoon pH could be 7.8. This would be a major stressor to your koi.
2. The next thing to test is the pond's ammonia level. With luck, it will say zero, which is what it should be if all is going well. But let's say the filter has been turned off, and let's say the ammonia level is .25 ppm. Remember, fish breathe out ammonia, like we breathe out carbon dioxide. So even though you haven't started feeding yet, the ammonia might not be converting to nitrite and then on to nitrate because of an inactive bioconverter. The good news is that since the pond water is still cold (at least in my goldfish pond), and if the pH is on the low side, the ammonia is not going to be far less toxic. But if the pH swings up high during the 24 diurnal process, this could really stress the koi. Ammonia (like nitrate) interferes with gill activity. Gills can be burned and irritated, and problems then follow. The dangerousness of ammonia is dependent on the water temperature, the pH, and amount of total nitrogen present. The warmer the water, the higher the pH, the more toxic ammonia gets.
3. If ammonia is present, and it's time to begin the weekly 10% water changes (which our club recommends), consider purchasing an ammonia gobbler product like Ultimate or Total Clear or Microbe-Lift Extreme x (all available at your local dealers or on-line), doing the water change, then adding the requisite amount of product, and THEN adding new water from the tap. These products handle chlorine as well as ammonia. When the ammonia is locked up, add baking soda (yes, Arm and Hammer, see Costco's big bags) to your skimmer or filter tubs, maybe half a cup per day until you reach the desired level of 80 ppm or higher. I keep mine around 125 ppm. As soon as the bioconverter gets up to speed, the bacteria will convert it to nitrite, and then other good bacteria convert it to the less harmful nitrate (which is taken care of with water changes). Note: local tap water has little buffering capability. So you have to monitor and add as needed to keep the KH level above 80 ppm. If you are using well water, that's a different story.
4. Once the water temperature hits 55 degrees F. (some people wait until it hits 60 and some start the minute the pond water is 50 degrees for a solid week at say 7 a.m.), feed lightly, say once a day or every other day for a week. Joel Burkard once advised me to throw in fewer pellets than there are fish in the pond, which he said wakes up their interest in food and gets their competitive spirit racing. At this point, the filters are up and running but not at their potential,

and if they were scaggy from disuse, and autumn crud, they would need rinsing out with pond water (this works well with Japanese matting and bioballs and Matala). If you have had your bioconverters on all winter, it won't take long for them to get up to speed, but it is crucial to monitor KH, pH, ammonia, nitrite frequently so you know what's going on with the water chemistry. As the temperature climbs up, begin to feed normally. Koi prefer multiple small meals, rather than one large one (watch the pellets go into the skimmer and the filters).

5. And speaking of feed, make sure the food is fresh, or stored carefully in a rat-free, cool environment, with no possibility of mold. Make sure the food hasn't expired. I've taken to buying smaller bags of food instead of the 33 lbs. I used to use just so the food is very fresh.
6. Now is a good time to evaluate how the koi have made it through the winter. Are you seeing frayed fins? Any sores? Now might be an excellent time to do a scope and scrape to see if flukes or trichodina are present. Many of you have taken our beginning wet lab, so you know how to do this. (Also, see the article on the Microflip scope in this issue.)
7. Purchase, now, a KH test kit. Aquarium Pharmaceutical makes a drop test kit, but it is not included in the Master Kit. It should be, in my opinion, as it is critical. But for now it has to be bought separately. See your local dealer or go on-line. See business card ads for Play It Koi, Pan Intercorp, Falling Water Gardens, and Skagitek and make a call. Some have curb service right now or can ship it to you.

This covers a lot of ground (or water, as the case may be), but if you want a more comprehensive look at what is involved in "Coming Out of Winter," and you are a member of Koi Organisation International, go to www.koiorganisationinternational.org and go to the archived articles, and read Richard E. Carlson's article by that name. He goes into great detail about Total Ammonia Nitrogen and the correlation of temperature and pH. Or, you can just Google Richard E. Carlson "Coming Out of Winter" and you will see there is an entry under North Idaho Koi Club. Happy reading!