

# Crystal Red Shrimp (CRS) - care guide

*Caridina cantonensis*

The step up from Neocaridina, and a genuine one: strikingly banded red and white, and considerably less forgiving. These need soft, acidic, actively managed water - not tap water.

## At a glance

Difficulty: Intermediate

Adult size: 2-3cm

Lifespan: 1.5-2 years

## Water parameters

Temperature: 20-23°C

pH: 5.8-6.8

GH: 4-6

KH: 0-2

TDS: 100-150

These are the ranges to aim for, not the extremes they can survive. Shrimp are far more sensitive to sudden change than to imperfect conditions - stability matters more than hitting an exact number.

## Keeping them

Crystal Red Shrimp are where the hobby stops being forgiving. They are beautiful - crisp white bands over deep red, at their best genuinely jewel-like - and they will not tolerate the casual approach that Neocaridina survive.

The central difference: CRS need soft, acidic, low-mineral water, and almost no UK tap water is suitable. The standard approach is to start from RO (reverse osmosis) water, which is effectively pure, and remineralise it to a known GH with a purpose-made Caridina salt. This gives exact, repeatable parameters - which is the entire point, because these shrimp are far more sensitive to \*variation\* than to any particular value.

They are usually kept over an active soil substrate, which actively buffers pH down into the low sixes and holds it there. Active soils are consumable: they exhaust over roughly 12-18 months, after which pH creeps up and the tank needs rescaping. Plan for that rather than being surprised by it.

Do not attempt CRS as a first shrimp. Keep Neocaridina for six months first - everything you learn transfers, and you will learn it on animals that forgive mistakes.

## Water

This is the section that matters most, and the one people skip.

Start from RO or distilled water. Not tap, not filtered tap. Remineralise with a Caridina-specific GH+ product to GH 4-6. Note that Caridina salts add GH only - the near-zero KH is deliberate and correct here, and using a Neocaridina GH/KH+ product will push KH up and pH with it.

KH 0-1 is intended, not a mistake. With no carbonate buffering, the active soil controls pH. This is why the soil matters so much and why an exhausted soil is a slow crisis rather than a cosmetic issue.

TDS 100-150, and stable. Buy a TDS meter before you buy the shrimp; it is the single most useful instrument in Caridina keeping, and it costs very little. Rising TDS between water changes is normal as water evaporates and minerals concentrate - top up evaporation with pure RO, never with remineralised water, or TDS will climb indefinitely.

Temperature at the low end. 20-22°C is ideal. Above 24°C, CRS lifespans shorten noticeably and they become more susceptible to bacterial infection.

Water changes: small and frequent - 10% weekly, matched on temperature and TDS. A large change is a bigger risk to a CRS colony than slightly stale water is.

## Feeding

Much as other dwarf shrimp - biofilm first, supplemented lightly - but with less margin for error, because the water-quality consequences of overfeeding arrive faster in a low-KH tank with no buffering.

Feed a quality Caridina-specific food two or three times a week, in quantities the colony clears within a couple of hours. Remove anything left.

Indian almond leaves (catappa) are close to standard practice in CRS keeping and worth using deliberately. They release tannins that mildly lower pH and have a genuine antibacterial effect, and as they break down they grow the biofilm that shrimplets graze on. A leaf or two left to decompose is doing several useful jobs at once.

Avoid protein-heavy foods and feed them rarely if at all. They are associated with bacterial blooms in soft-water tanks.

## Telling males from females

Same method as Neocaridina - saddle, then belly shape, then size - but noticeably harder, and for a reason worth understanding.

The white banding hides the saddle. On a Cherry Shrimp the ovaries show as a clear patch through a translucent red body. On a Crystal Red the back is where the opaque white is, and a saddle underneath it is often simply not visible. The higher the grade - the more solid white - the worse this gets. On an SS or SSS you may never see one.

So on Crystal Reds, body shape does most of the work. An adult female's abdomen curves down into a distinctly deeper profile; a male's is straight and slim. Females are also visibly larger and rounder-bodied overall.

Practical consequence: sexing high-grade CRS reliably is a job for adults, not juveniles. If you want a breeding colony, buy ten or more rather than trying to hand-pick pairs - nobody can sex a young SSS accurately, and any seller claiming a guaranteed ratio on juveniles is guessing.

Lower grades with more red showing are considerably easier, which is one more small argument for starting at A or S grade.

## Breeding

CRS breed readily once conditions are genuinely right - and a colony that is not breeding is telling you something about your water rather than about the shrimp.

Like Neocaridina, there is no larval stage: eggs hatch as miniature adults after roughly 30-35 days, and shrimplets are independent immediately. Clutches are smaller, typically 20-25.

The difficulty is not the mechanics but the stability. Berried females are the last thing to appear in a maturing CRS tank and the first thing to stop in a declining one. Treat a sudden halt in breeding as an early warning: check TDS, check pH, check whether the soil is exhausting.

Grade genetics are involved. CRS grades relate to the amount and opacity of white, and higher grades are less genetically robust - the highest grades carry reduced fertility and lower shrimplet survival as a direct consequence of the inbreeding used to fix them. Breeding S-grade to S-grade indefinitely tends to weaken a line; many experienced keepers deliberately breed a grade down occasionally to keep vigour up.

CRS and Crystal Black Shrimp (CBS) are the same species and interbreed freely, producing mixed offspring. Keep them separate unless that is what you want.

## Tank mates

The honest answer for CRS is nothing, or almost nothing.

The water they need - pH below 7, very low mineral content - suits very few fish, and the investment in a CRS colony makes any predation risk disproportionate. A species-only tank is the standard approach among people who keep these successfully, and it is standard for good reason.

If you must add something: pygmy corydoras, otocinclus, and chili rasboras all tolerate soft acidic water and are small enough to be low-risk. Nerite snails are fine, though they will not breed at this pH.

Do not mix with Neocaridina. Not because they interbreed - they cannot, being different genera - but because their water requirements are genuinely incompatible. Water suitable for CRS is too soft for Neocaridina to moult reliably in, and water suitable for Neocaridina is too hard and alkaline for CRS. One population will always be compromised.

## Common problems

Gradual, unexplained losses over weeks. The classic CRS failure, and usually TDS or pH drift rather than any single event. Measure before you intervene - the instinct to do a large water change will make it worse.

Colony stops breeding. Usually the first sign of soil exhaustion. Check pH: if it has crept from 6.3 toward 7, the soil is spent.

Moulting deaths. GH too low, or a TDS swing. CRS need less GH than Neocaridina, but not zero - below GH 3 they struggle.

Bacterial infection after a temperature rise. Summer is genuinely dangerous for CRS in an unchilled UK tank. Above 25°C, watch closely; above 27°C, act - a fan across the surface is usually enough.

Losses in the first fortnight after arrival. Very common with CRS specifically, because a shipping bag's parameters drift a long way from a low-TDS tank's. Drip acclimatise over three hours minimum, and expect these to be harder to establish than any Neocaridina.

White ring at the midsection. Failed moult, as with Neocaridina. Check GH and recent TDS movement.

## Grades & buying

CRS grading is the most developed in the hobby, and unusually, it is reasonably consistent between sellers - the terminology comes from an established Japanese system rather than being invented per-shop.

Ascending: C grade (mostly red, thin broken white banding), B grade (more white, still patchy), A grade (clear banding), S grade (thick white bands, high opacity), SS grade (large solid white areas - patterns like "hinomaru", a red circle on a white saddle), SSS grade (predominantly white with red points, including "mosura" patterns).

Price rises steeply with grade, and so does fragility. Higher grades are less robust, with lower fertility and higher shrimplet mortality - a direct cost of the selective inbreeding that fixes the pattern. This is a real trade-off, not marketing.

Practical advice for a first CRS purchase: buy A or S grade, not SS or SSS. They are dramatically more forgiving, breed more reliably, and cost a fraction as much while you are still learning whether your water management is sound. There is no benefit to losing an expensive SSS colony to a lesson an A grade would have taught you.

White opacity is the main value driver, and it photographs inconsistently - ask for photos under neutral light rather than under strongly coloured plant lighting.

## In the wild

\*Caridina cantonensis\* comes from southern China - the Guangdong region around Canton, which gives the species its name - where it lives in shaded forest streams running over granite and leaf litter.

Those streams are soft and acidic, and that is the whole story of this animal's care. Water draining through decomposing leaf litter over mineral-poor rock arrives low in dissolved solids and below neutral pH. Nothing in the animal's evolutionary history has prepared it for the hard, alkaline tap water most of the UK runs on - which is why RO water and remineralisation aren't fussiness, they're a reconstruction of the habitat.

The leaf litter matters twice over: it acidifies the water, and it grows the biofilm the shrimp graze. That's why Indian almond leaves are near-standard practice in Crystal Red keeping rather than an optional extra - they're doing in a tank what a forest floor does in a stream.

Shaded forest streams are also cool, which is why 20-23°C suits them and why summer heat is a genuine risk in an unchilled UK tank.

The wild animal is the "Bee Shrimp" - a black-and-white banded shrimp, unremarkable to a non-specialist. Crystal Reds are a bred colour form of it, not a separate species.

## How it reached the hobby

This is the one origin story in the hobby that is properly documented, and it's worth telling accurately.

In 1993, the Japanese breeder Hisayasu Suzuki found a single red individual in a colony of ordinary black Bee Shrimp. It was a recessive mutation. He bred from it selectively over successive generations to fix the trait, and by 1996 had stabilised the line, branded it Crystal Red Shrimp, and obtained a patent on it. Every CRS in the world descends from that work.

The animal reached wider markets in the late 1990s and through the 2000s, and the Japanese grading system - C through to SSS, with the hinomaru and mosura patterns - came with it, which is why CRS grading is unusually consistent between sellers compared with the free-for-all around Neocaridina names.

A note on the scientific name, because the hobby and the taxonomy disagree. Crystal Reds are almost universally sold as *\*Caridina cantonensis\**, and that is what most care sheets say. But in 2014, Klotz and von Rintelen described several new species from Guangdong - including *\*Caridina logemanni\**, named after the breeders Frank and Carsten Logemann - and Bee Shrimp and their Crystal Red derivatives are now generally assigned to that species rather than to *\*cantonensis\**.

In practice the trade name has not caught up, stock has been mixed and crossed for decades, and what you buy may genuinely be either or a hybrid. Nothing about the care changes. It is worth knowing chiefly so that a listing saying *\*cantonensis\** doesn't look like an error, and a listing saying *\*logemanni\** doesn't look like a different animal.

The trade-off in that grading ladder is real and worth understanding before buying at the top of it. Fixing a pattern as precise as an SS or SSS requires sustained inbreeding, and the cost is vigour: higher grades are measurably less fertile, with lower shrimplet survival. A hobbyist buying their first Caridina is nearly always better served by A or S grade - more forgiving, more prolific, and a fraction of the price while they learn whether their water management is sound.

Crystal Black Shrimp (CBS) is the same species and the same programme with the red replaced by black. The two interbreed freely.

Care advice is general guidance - if something in your tank disagrees with this guide, trust your own water tests. Read the latest version at [shrimpbay.shop/species/crystal-red-shrimp](http://shrimpbay.shop/species/crystal-red-shrimp)