Close-Focus Wide Angle

By Eric Lambert

Some photographic ideas never really disappear. They simply wait.

Long before digital sensors, autofocus algorithms, and precision-machined housings, underwater photography was an exercise in anticipation. Film forced restraint. Every frame mattered. Every decision, whether distance, exposure or timing, was final. You learned to see before pressing the shutter.

I started underwater photography more than thirty years ago with a Nikonos III. No LCD. No histogram. Just a camera, a lens, and the quiet certainty that if you missed the moment, it was gone forever. Over the years, through more than 3,000 dives with half of them in cold, green Swiss lakes, I learned that the most compelling underwater images were rarely about magnification alone. They were about relationship: subject to environment, detail to context, foreground to story.

One technique embodied that philosophy better than any other: Close-Focus Wide Angle. And for reasons that still puzzle me, it quietly vanished.

A Forgotten Way of Seeing

In the film era, CFWA was not a buzzword. It was a solution. A creative response to the limitations of wide-angle lenses and the storytelling demands of underwater photography.

Using the Nikonos system, most often a 35mm lens paired with a dedicated close-focus or wet lens attachment, we could focus far closer than the native optics allowed. This dramatically increased subject size while preserving a wide field of view. Small subjects no longer disappeared into the frame. They anchored it.

The effect was transformative.

A blenny was no longer just a portrait, it became a character in its habitat. A nudibranch was not isolated against blue water but grounded on the reef it inhabited. CFWA allowed us to show scale, proximity, and environment in a single image, long before those words became fashionable. It was not macro. It was not wide angle. It was something in between and something more powerful. When digital arrived, I assumed CFWA would evolve

Nauticam NA-A2020, Tamron 20mm f/2.8 Di III 1:2, Backscatter MF-2 + snoot. f/11 1/60 ISO100

Nauticam NA-A2020, Tamron 20mm f/2.8 Di III 1:2, Backscatter MF-2 + snoot / 1 x Retra Pro X. f/11 1/100ISO 100

Nauticam NA-A2020, Tamron 20mm f/2.8 Di III 1:2. Backscatter MF-2 + snoot. f/16 1/80 ISO125

alongside it. Instead, it faded.

The Digital Shift and the Gap It Created

Digital photography brought extraordinary progress: instant feedback, high ISO performance, autofocus precision, and dynamic range that film could never match. But it also narrowed creative pathways. Underwater, lenses became more specialized. Macro lenses delivered exquisite detail however stripped away context. Ultra-wide lenses captured dramatic scenes but rendered small subjects insignificant. The in-between space, the storytelling space, was largely abandoned.

Like many photographers, I adapted. I accepted that certain images belonged to film history. CFWA became something I remembered fondly but no longer pursued. Until I realized I still missed it.

The One Company That Refused to Let CFWA Die

To be fair, CFWA did not vanish entirely. When Nikon stepped away from underwater photography and wet optics, one company picked up the challenge: Nauticam. Their EMWL (Extended Macro Wide Lens) system is a remarkable piece of optical engineering, modular, precise, and uncompromising in image quality.

The EMWL is not just a product; it is a statement. It says that close-focus wide angle still matters. Relay optics, interchangeable objectives, and carefully corrected aberrations allow photographers to achieve true CFWA in the digital era. Nauticam deserves immense credit for preserving and advancing this concept when others walked away.

But there is no avoiding the reality: the EMWL system is complex, heavy, and prohibitively expensive for most underwater photographers. At close to €8,000, it remains out of reach for many, even professionals. I admired it. I respected it. But it was not my solution.

An Unexpected Rediscovery

The breakthrough did not come from the underwater world at all. It came from looking at land lenses differently. Tamron's Di III OSD series, specifically the 20mm/2.8, lenses are marketed as compact, lightweight wide angles for mirrorless systems. On paper, they looked unremarkable. Until I read one specification twice: 1:2 reproduction ratio.

At first, it seemed like a typo. A 20mm lens

Nauticam NA-A1, Tamron 20mm f/2.8 Di III 1:2. Backscatter MF-2 + snoot / 1 x Retra Pro X. f/18 1/1 0 ISO320

capable of focusing down to 14 cm and achieving half life-size magnification is, by definition, a macro lens. But with nearly a 100-degree field of view, it occupies a category that barely exists in underwater photography. This was not wide angle with a diopter. This was native close-focus optics.

Suddenly, CFWA was no longer a memory. It was a possibility.

The Missing Piece: A Dome That Did Not Exist

There was only one problem. No dome port on the market was designed for this lens.

At such extreme close focusing distances, dome geometry is not a housing accessory. It is an optical component. Radius, diameter, glass thickness, and nodal alignment all matter. A standard dome would introduce unacceptable softness, distortion, and focus shift. So I did what photographers have always done when the industry does not provide an answer: I started asking questions.

That is how I met José at SAGA Dive.

From the very first exchange, it was clear that this would not

be a cosmetic modification or a repurposed part. José approached the problem as it should be approached: optically.

Together, and in collaboration with an optician, we worked through the fundamentals:

- Entrance pupil position of the Tamron 20mm
- Minimum focus distance underwater
- Virtual image formation behind a dome
- Optimal dome radius to maintain corner sharpness
- Glass thickness and curvature to minimize aberrations

These calculations are not theoretical. Underwater, light behaves differently. Refraction changes effective focal length. A dome port must create a virtual image at a distance the lens can resolve especially at extreme close focus.

The result was a custom glass dome, purpose-built for this lens. No compromises. No off-the-shelf shortcuts. And the price? Approximately €700. Not inexpensive but accessible. And orders of magnitude below the cost of modular relay systems.

Back to the Beginning With Better Tools

The first dives with this setup felt strangely familiar. I was once again inches from my subject. Sometimes closer. The lens locked focus effortlessly. The background remained wide, immersive, and present. The subject filled the frame not because it was magnified artificially, but because I was truly close. This was CFWA again. But better.

Compared to the old Nikonos 35mm setup, the field of view is wider. The image quality is sharper. Autofocus is reliable. Digital sensors handle dynamic range effortlessly. What once required absolute precision now rewards creative exploration.

It felt like reclaiming something that had been lost, not technically, but philosophically.

And this is why CFWA is

Nauticam NA-A1, Tamron 20mm f/2.8 Di III 1:2, 2 x Retra Pro X. f/16 1/25 ISO200

Nauticam NA-A1, Tamron 20mm f/2.8 Di III 1:2. Backscatter MF-2 / Retra Pro X. f/16 1/50 ISO250

Nauticam NA-A1, Tamron 20mm f/2.8 Di III 1:2, 2 x Retra Pro X + 1 x Backscatter MF-2 + Snoot. f/14 1/13 ISO250

not a trick. Close-Focus Wide Angle is often misunderstood. It is not about novelty. It is not about optical bravado. It is about storytelling. When we isolate a subject completely, we remove it from its world. That may be beautiful but it is incomplete. Especially when our audience is not composed of divers. Simply because context matters. A tiny shrimp framed against the reef tells a different story than the same shrimp against black water. A fish interacting with its surroundings communicates scale, vulnerability, and behavior. CFWA allows us to show where a creature lives, not just what it looks like. For those of us who care about the ocean beyond aesthetics, i mean education, conservation, and emotional connection, this matters deeply.

But let's be honest. This approach is not without challenges. Extreme proximity demands precise lighting. Backscatter control becomes critical. Composition requires discipline. There is nowhere to hide mistakes. But these are not drawbacks. They are creative constraints. The reward is an image that feels immersive, honest, and alive.

It is not macro pretending to be wide angle. It is not wide angle pretending to be macro.

It is something else entirely.

Lighting CFWA is where intention becomes visible. At extreme close focus, light behaves very differently: proximity exaggerates contrast, particles become unforgiving, and any uncontrolled spill immediately flattens the image.

Over time, I have moved away from symmetrical wide-angle lighting and adopted a more layered approach. In its simplest form, this may involve a single snooted strobe to precisely

Extreme CFWA lighting example.
Two snooted strobes were used to independently light the small foreground subjects, while a third, unsnooted strobe provided low-level illumination for the background. This layered lighting approach allows precise subject separation without sacrificing environmental context. This is an essential balance in close-focus wide angle photography.
Sony A7rIV in Nauticam NA-A2020 with Tamron 20mm f/2.8 Di III (1:2), 2 × Backscatter MF-2 with snoots / background strobe, 1 × Retra Pro X. f/8 · 1/40 s · ISO 100

light the main subject, combined with a second, unsnooted strobe at lower power to gently reveal the background. In more complex scenes, such as the image shown here, I sometimes push this further, using two snooted strobes to independently sculpt multiple small subjects, while a third, wide beam strobe is dedicated solely to the environment.

This may sound excessive, but in practice it mirrors the philosophy of CFWA itself: control where precision is needed, and allow openness where context matters. Snoots are not used for drama alone; they are tools for restraint.

By preventing light from spilling where proximity already creates dominance, they help establish visual hierarchy. It shall guide the viewer's eye first to the subject, then outward into its surroundings. When lighting is treated this way, CFWA stops being a technical exercise and becomes a deliberate narrative choice.

Closing the circle, I did not set out to reinvent CFWA. I simply wanted it back. What began as nostalgia became a technical challenge, then a collaboration, and finally a rediscovery. The tools have changed. The philosophy has not. Some ideas are too good to abandon. Sometimes, the most meaningful innovation is not inventing something new. But reclaiming something we once understood, and seeing it again with fresh eyes.

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