STORM LURES

As mentioned previously, Storm's UV Bright finish palette builds upon a white reflective base, but it doesn't stop there. Because white does not reflect with the strength of chrome, all Storm UV Bright finishes utilize a matte finish coat. In order for the optical brighteners and fluorescent paints to collect and return a maximum amount of light, the matte finish minimizes the initial reflection off the surface coating. This allows the paints to accept as much energy as possible in order to vividly release it.

The structure of Storm UV Bright finishes is taken from the basic components of forage species where the strength of color is found along the back, giving way to a white underbelly beneath. Fluorescent belly stripes highlight the target area to predators approaching from behind or below.

UV BRIGHT STORM UV BRIGHT FINISHES AVAILABLE ON

ThunderCrank® MadFlash

ThunderStick® MadFlash

Deep Rattlin' ThinFin®

Hot 'N Tot® MadFlash

Deep Baby ThunderStick®

Wiggle Wart® MadFlash

Jointed MinnowStick®

Giant FlatStick®

Giant ThunderStick® MadFlash

LUHR-JENSEN

Few fisheries understand the value of vivid attractor patterns like the salmon, steelhead and trout markets, and Luhr-Jensen's UV Bright palette embraces the need with each finish. Bold side or back stripes transition to metallic chrome bodies while black contrast dots with inset highlights provide superior contrast in all water conditions.

From the ocean and reservoirs to shallow streams and rivers, the depth of presentations can vary from well over 100 feet, down to just a few. Beginning with pink and red, then to chartreuse and green, and finally to blue, the color selection runs the spectrum necessary for the deepest to the most shallow applications.

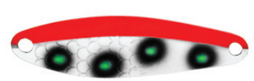
UV BRIGHT LUHR-JENSEN UV BRIGHT FINISHES AVAILABLE ON

Shoehorn Spoon

Dipsy Diver®

Coyote™ Spoon

Coyote™ Flasher



Kokanee Needlefish™

J-Plug™

Needlefish™

Kwikfish®

BLUE FOX

To the complete reverse of the Classic Vibrax, where fluorescent bodies are circled by highly reflective blades, the Blue Fox UV Bright selection begins with a reflective chrome body and builds upon the vibration delivered from the brass gear and bell housing with high-definition blade prints. Sharp contrast and simplified dot patterns maximize the ability of fish eyes to visually target the Vibrax's strong vibration.

Here again, the finishes include components from the full spectrum of color to fit the complete range of fishable water conditions. Blade sizes from #3 to #6 assure no matter what your target species, you'll be ready for every challenge.

UV BRIGHT BLUE FOX UV BRIGHT FINISHES AVAILABLE ON

Classic Vibrax® UV

UV BRIGHT

The Superior Sensory Magnet.

UV Bright Enhances Lure Visibility To Deliver Catches In All Levels Of Light.

Rapala®
rapala.com

WELCOME TO UV BRIGHT

Fact and fiction. There's a lot of both in anglers and fishing tackle. Where fish often grow exponentially between the time of their release and the first recounting of the capture, so too do tackle claims that overlook the complex nature of attraction in favor of simplified fixes.

Ultraviolet, or UV, lure finishes are a relatively new addition to fishing tackle. The premise of their existence is found within the fact that the vision of many predatory fish includes the capacity to see this short wavelength light. With a range of science in hand, many lure manufacturers have incorporated varied manufacturing processes in order to position UV lure finishes as necessary to the success of lures.

The Rapala Product Development Team launched a two-year fact-finding mission to research and test ultraviolet lure finishes. The resulting release of UV Bright finishes within Storm, Luhr-Jensen and Blue Fox product lines incorporate research conclusions to deliver anglers the best components of UV technology. Beginning with the most successful lure actions available, UV technology can enhance the visibility of lure finishes under the greatest range of water conditions.

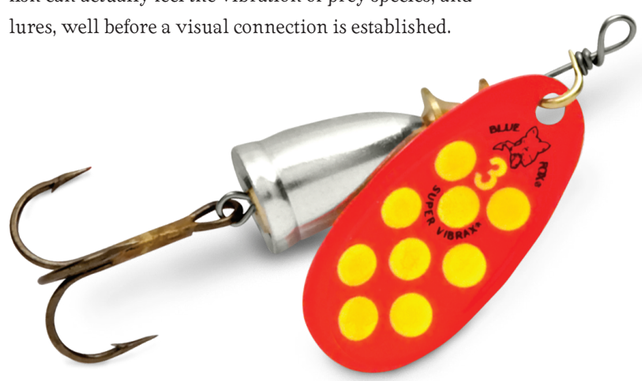
VISION: HUMANS VERSUS FISH

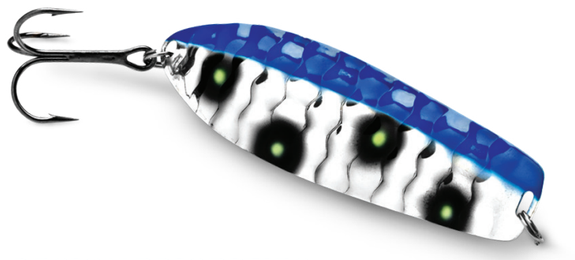
Naturally, anglers tend to judge lure finishes as they appear to the human eye. This approach overlooks the basic biological differences between the human eye and the eye of fish. Where the human eye has a great capacity to distinguish detail, the eye of a fish does not. The rods and cones within the eye of most fish are arranged in a manner that highlights sensitivity to motion and contrast at the expense of detail.

Visible light is another issue. Where colors are of extreme importance in our environment, beneath the water's surface, colors in the visible spectrum are quickly filtered out as depth increases. Color removed, what remains are shades of grey which could be the underlying reason for fish's high sensitivity to motion and contrast.

Ultraviolet means "beyond violet" and considering ROYGBIV (Red, Orange, Yellow, Green, Blue, Indigo, Violet), the acronym for the color spectrum, it's light that exists beyond the shortest wavelength of visible light, violet. For fishery applications, UV discussion is confined to UVA light, with wavelengths ranging from 400- to 315-nanometers. Light within this spectrum penetrates the water column much deeper than visible light, and is available in periods of low visible light, like dawn, dusk and overcast conditions. In short, the principles of UV lure finishes center on this depth of penetration and greater availability than visible light, and the corresponding theory that a lure that is more visible, is more available to hunting predators.

Sight, however, is only one component of predatory fishes' sensory system. Additionally, fish rely heavily on vibration or "feel" to hunt. A fish's lateral line is a highly sensitive string of nerve receptors positioned along each side of their body. In their water environment, many predatory fish can actually feel the vibration of prey species, and lures, well before a visual connection is established.





DESIGN PRIORITIES

Realizing the importance of the combined senses fish use to locate and attack prey, Rapala designers developed the following priorities to guide the critical components of lure attraction.

■ Lure action is paramount. Vibration available to the lateral line coupled with a well-developed sense of motion is the key to predatory species ability to locate, identify and attack prey. This may explain why certain lures are continually top performers over multiple decades relying on basic finishes covering very well designed actions.

■ Contrast is more important than detail. It's very likely that predatory species do not assess lures for exact realism. In fact, too much detail may hinder lure attraction by diminishing its ability to deliver contrast. This is quite possibly the reason chartreuse is such a successful color in so many fisheries. Chartreuse stands out vividly in all water environments.

■ Properly executed UV finishes should increase the visibility of lures to fish at depth and in periods of low visible light. The science shows the capacity of many fish species to see within the UVA spectrum. Where the visible light spectrum begins to be filtered out at depths of five feet or less (red is the first color to go), shorter wavelength UVA light can penetrate to depths of hundreds of feet.

Putting the science to work, Rapala designers incorporated the following components in the delivery of a UV platform that provides anglers the best combinations of lure actions and finishes available.

PRIORITIES IN PRACTICE

■ Begin with the finest lure actions. Storm, Blue Fox and Luhr-Jensen are market leaders for a reason. In the absence of UV technology, the lure actions by themselves trigger an aggressive response from game fish. With thousands of examples of lures where the finish has been chewed off nearly in total, the vibration and action alone continue to solicit strikes.

■ Incorporate a reflective base. This consists of chrome on Luhr-Jensen and Blue Fox lures, and white on Storm lures. We see colors by what they reflect. Where chrome reflects individual colors that are bounced off of it, white reflects all colors simultaneously. Both reflective bases utilize reflection to capture the attention of fish's motion-sensitive eyes.

■ Utilize fluorescent paints only. Fluorescence is the emission of light that has been absorbed. In many instances the absorbed light is within the UV spectrum and its' release is at a longer wavelength within the visible spectrum. For lures, absorbed UV light is released from the lure finish to highlight visibility to predators.

■ Deliver high contrast. Contrast plays to the strength of fish vision. Regardless of ability to discern specific colors, simplified patterns with strong contrast are very available to the eyes of game fish. Consider specific colors with regard to light or dark and utilize that value to assure lures stand out.

■ Overspray with optical brighteners. The components are the same that are in laundry detergents to boost the vividness of colors and whites. Their function is to absorb light in the ultraviolet region and immediately re-emit it as blue light. Blue light enhances perception of colors and is common in fish tank lighting to make fish stand out dramatically against their environment.

■ Provide definitive color selection. Back to ROYGBIV as the basic components of the visible spectrum, each lure family from Storm, Luhr-Jensen and Blue Fox delivers finishes that cover the range. Many water bodies, based upon the geography of their environment, depth, water clarity and chemical composition filter light and colors at different rates. It's why top lure finishes often change from one body of water to the next. The refined selection of UV Bright finishes anticipates the need with finishes drawn from the full range of the spectrum.