

HED: IN SEARCH OF MONSTER FISH OF THE CONGO

Deck: National Geographic Explorer Camera Crew Captures the Goliath Tigerfish with Sony XDCAM HD

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With its menacing, dagger-like teeth, the Goliath Tigerfish has lived in relative obscurity for ages in the depths of the Congo River. But “Monster Fish of the Congo,” which premiered as an “Explorer” episode on the National Geographic Channel on February 10, 2009 at 10 p.m., brought this ravenous predator and other aquatic wonders to light.

Capturing HD footage of this giant, piranha-like fish and other underwater mysteries of the Congo River was no easy feat. It meant traversing the Congo, the most powerful, fast-moving river in the world, which is fraught with whitewater rapids, deadly whirlpools, and other lethal dangers.

Under these harrowing conditions, a video production crew—led by Veteran DP Thierry Humeau—ventured into the Congo and shot over 40 hours of HD footage using a Sony XDCAM HD422 PDW-700 and two Sony PMW-EX1 XDCAM-EX format camcorders.

The camera crew was part of a month-long expedition that transported a team of scientists, anglers, and kayakers to the Democratic Republic of the Congo (DRC) in the summer of 2008 to make and document discoveries about the evolution of aquatic life, including the elusive Goliath Tigerfish.

A HARROWING JOURNEY

Lugging 20 cases of camera equipment, six kayaks, and 30 cases of scientific, survival, and camping gear, the team flew from Dulles Airport in Washington, DC to Paris, and then on to the DRC’s capital city Kinshasa.

When they were starting out at Dulles, the expedition hit a serious snag that threatened to derail the expedition—the airline claimed there wasn’t enough room on the plane for the kayaks. These six-foot, one-man kayaks, which could not be obtained in the Congo, were crucial to reaching remote areas of the Congo River that were not accessible by roads. At the last minute, the production team breathed a sigh of relief as space was found for the boats.

One of the Sony PMW-EX1’s was enclosed in a custom-designed, watertight housing and mounted on the front of one of the kayaks. This “kayak-cam” provided unique angles from a kayaker’s point of view as he careened down raging whitewater rapids. Since they are very compact, rugged, and lightweight, the EX1 cameras were used to capture B-roll footage in situations requiring utmost portability and agility.

Also, a lipstick-sized, waterproof SD camera attached to a pole was submerged into the river to capture views of small fish and other aquatic life.

Principal photography was captured using the Sony PDW-700 XDCAM HD camcorder. Humeau determined that this was the ideal acquisition medium for this challenging production because it offered superior picture quality; handled extreme lighting levels; and provided rock-solid reliability and durability that would be essential when shooting in such harsh, remote conditions, commonly plagued by water, spray, rain, fine sandy beaches and strong winds. The cameras needed to operate flawlessly because there wouldn't have been any way to get them fixed or replaced on location.

"My goal was to replicate the natural, pristine beauty of the Congo. So, I didn't want to use artificial lights because as soon as you do, you destroy the natural mood and setting, and it looks as if you're shooting news," said Humeau, who is Washington DC-based.

"For this reason, the '700' camera was really key because the exceptional performance of its [three 2/3-inch Power HAD FX] CCDs enabled me to really push filming in available light," Humeau said. "The camera adapted easily between silhouettes of people at sunset, campsites at sunrise, bright sunlight reflecting on the water, and other contrast, latitude, and color challenges. Even after cranking the camera's gain to 9 or 12 dB, the footage showed very little noise."

For audio recording on location, Humeau used Sony's digital wireless system, the DWR-S01 dual-channel receiver paired to a DWT-B01 transmitter. The system is fully integrated with the camera body, which handles four channels of audio recording, and the wireless features can be controlled through the camera's LCD panel. Humeau said the system provided "phenomenal range with no interference."

SHOOT, SCREEN, STORE

The PDW-700 could record over 100 minutes of 1080i HD footage onto a single rewritable Professional Disc. Unlike camcorders relying upon solid-state memory, which require that video be off-loaded to free up space for more shooting, Humeau could load up each disc with up to 100 minutes of continuously recorded HD footage, then take that disc out and pop a new one in. The discs served as both the record and archival medium, which was a time-saver and logistical convenience.

The EX1 camcorders record onto Sony SxS PRO Express Card Memory cards. One 16GB card enables 70 minutes of HD recording, while shooting with two cards enable 140 minutes, and the recording media is shock resistant. The 1080i HD footage shot using the EX1's produced HD imagery complementary to the PDW-700, which made it possible to intercut the B-roll with principal photography without a noticeable quality difference.

Each night, the EX1 footage was uploaded from the memory cards to a laptop PC for screening, and backed up onto one of four 500 GB Lacie hard drives for safekeeping. Scenes shot using the PDW-700 could also be viewed as thumbnails on the camera's LCD screen. By running a cable from the XDCAM camcorder to a laptop, the footage could also be transferred, screened, and logged there.

"Much of the time, the camera crew and scientific team traveled with all our gear down the river in two Pirogues, which are 50-foot dug out canoes powered by motors," said David Clair, a Los Angeles-based independent producer who produced the show. "There were times when I'd be sitting in a Pirogue as it moved swiftly through the water and I'd actually be viewing and logging the footage on my laptop. The ability to record digital files, and screen and log that footage on-the-run, saved many time-consuming steps in post production and gave us a jump-start on the editorial when we returned."

DANGERS AND DIFFICULTIES

According to Clair, tape-based acquisition would not have allowed them this level of flexibility and convenience. Screening tapes on these narrow boats would not have been practical because it would have required a playback deck, monitor, and power source, and cassette tapes would have been heavier and less durable.

"If our boats had been sucked under by a whirlpool, or if the camera gear fell overboard and floated away, it was comforting to know that the optical disc-based media could potentially survive and our watertight Pelican cases would protect the cameras," said Clair. "While some of the scientific gear, water filtration pumps, and other equipment malfunctioned, we never had a problem with any of the cameras, and never lost any of our media or data."

Additional screening and logging was done by Todd Wendel, a Washington, DC-based independent producer who served as the show's field producer and writer. Wendel said they were following a very strict itinerary throughout this trip because it is extremely difficult to travel around the DRC.

"Everywhere we went, we were constantly being asked to show our permits and other paperwork by local officials or militia. Since Thierry Humeau and David Clair were the only ones in our party who spoke French, they handled these encounters as diplomatically as possible on behalf of the expedition," said Wendel.

"Because we were white Westerners with cameras, government officials were very suspicious of our motives, or simply wanted to extort bribes, which we occasionally caved in and paid to avoid frustrating production delays. Our kayakers were even roughed up and had some of their personal belongings stolen, so we did fear for our safety."

Much of the drama that took place behind-the-scenes was not included in the show, Wendel said, because it was primarily a scientific documentary for National

Geographic, where the sole focus was on how aquatic life evolved in the treacherous waters of the Congo.

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