

# DP Paul Cameron on Shooting 'Pirates 5', Using Drone Technology, 'Westworld', and More

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By Adam Chitwood  May 15, 2017



Being a cinematographer on any movie presents its own set of challenges, but the experience of shooting a *Pirates of the Caribbean* film is uniquely tough. Not only is this a massive franchise with a lot of filming on the open seas, but as *Pirates of the Caribbean: Dead Men Tell No Tales* marks the fifth installment in the series, it follows the visually stunning collaboration of cinematographer **Dariusz Wolski** and director **Gore Verbinski** on the initial trilogy as well as Wolski's continued work with director **Rob Marshall** on *Pirates of the Caribbean: On Stranger Tides*.

But cinematographer **Paul Cameron** welcomed this challenge that was equal parts daunting and exciting. Cameron's filmography is diverse and impressive, ranging from visually stylized films like **Tony Scott's** *Man on Fire* and *Déjà Vu* to character dramas like *In the Land of Women*. Cameron was also at the forefront of digital technology having worked on **Michael Mann's** 2004 thriller *Collateral*, and he recently brought his talents to the small screen in a big way by serving as the cinematographer on the HBO sci-fi series *Westworld*.

I recently had the chance to speak with Cameron for an extended interview about his time on *Pirates of the Caribbean: Dead Men Tell No Tales* and his career in general. He revealed how shifting the production from location shooting in Puerto Rico to mostly soundstage work in Australia altered his aesthetic approach, discussed the challenge of following in Wolski's footsteps, and talked about using drone technology to capture intricate aerial shots in a fraction of the time a traditional method would take. We also talked about his work on *Westworld* and *Collateral*, his thoughts on the industry shift from film to digital, and what advice he'd give to people interested in entering the field of cinematography. It was a fascinating and fun conversation on my end, and I feel what Cameron had to say was illuminating about the work of a director of photography on such a massive film.

Additionally, I have to express my gratitude to Cameron—a technical snafu on my end resulted in our first conversation going un-recorded. He was gracious enough to speak with me again, so a sincere thanks for granting another interview.

***Pirates of the Caribbean* is this massive franchise. What's the experience of shooting a *Pirates* movie like?**

**PAUL CAMERON:** Well it's a great opportunity to be able to shoot a franchise film of this size. The *Pirates* films have been kind of anticipated and revered by generations for a long time. It's amazing, you're on a boat heading back to land and there's a boat in front of you with Johnny dressed as Jack Sparrow and you can see kids, 3, 4, 5 years old they haven't even seen the movies yet and they already know who Jack Sparrow is as he comes to shore. It's a daunting offer always because these films are so massive, but it's a great challenge and you know there's

gonna be great opportunities to do big visual photography.

**Well I know you guys were initially going to shoot in Puerto Rico before moving to Australia. So how did that location change kind of change your aesthetic approach to the film?**

CAMERON: Well I think the significant difference—we started the film scouting down in Puerto Rico and scouting around the Caribbean to do most of the principal photography on the ships, building a few ships and redressing a few ships and shooting most of it at sea. And then there was a slight hiatus on the film, and when we drilled back content-wise things changed and there were quite a few more ships, and it became apparent we'd be spending many, many days on the water, and as we know with water and weather and logistics you can lose quite a number of days in principal photography. It's challenging on the sea but for me it was a big shift just in methodology, having to wrap my head around the idea of all the ships being against massive green screens and blue screens and kind of recreating the feeling of the sea and the light, and not having shot the plates

beforehand having to visualize exactly what would be the third part of each. As you know when you do practical photography on the sea it's driven by light, water, and wind. There's a certain energy that happens when you're doing that and when you're shooting static against greenscreen you've gotta recreate that energy, so hopefully between the light and special effects and photography we did that.

**You said when you're shooting the plates aren't there yet. When you go back in in post-production, are you doing much alteration to match the new plates there?**

CAMERON: No I think the general thing in terms of matching lighting ratios and looks, I had a methodology to maintain the correct look throughout a sequence knowing we're at sea, it's gonna be late afternoon, so the lighting ratio would be 3:1 or something like that. Not a bright day where it's 4:1

but there'd be diffuse clouds, and perhaps in this particular scene we would stylize a little bit, maybe a flashback scene so we knew maybe we'd warm up the skies and warm up the key light and make it softer. So you get into this kind of committing to a visual patch for shots and sequences and hopefully they don't reorder scenes, because that's the biggest challenge with visual effects for me. It's one thing if you shoot it real, there's no way you can shoot a day scene and they can drop it in for a night scene. But there are times in films with visual effects where they do that, and so you lit something for day and suddenly it becomes night. Fortunately we didn't have that here. But you know most of the sky and the feeling of the water and what they're gonna do CG-wise that has to do more with the bigger kind of scenes with ghost ships and the bigger CG imagery, and that comes from working with the production designer and talking to them and getting clear about what the atmosphere is and what the transitions are. You'll see a big sequence in this movie where the ship goes into this kind of Bermuda Triangle-type zone that's



*Image via Disney*



*Image via Disney*

cloud-covered. There's big lighting effects and it's all based on conceptual illustrations.

**You're also working with filmmakers who haven't made a film of this scale before. When you first sat down with the directors in your early conversations, did you guys hit upon a specific aesthetic they wanted to capture? Was there a specific take on the *Pirates* franchise they wanted to capture visually?**

CAMERON: Well I think the directors were hired to bring kind of a fresh look to the franchise while also a reverence for the franchise to date, and I think that's what the guys accomplished and hopefully accomplished overall in the film. You know there's a lot of pressure whether you're experienced or not as a director walking into a project like this, and I think the bar is set very high for story and action sequences and certainly visually. The directors are well aware how big and kind of epic this franchise needs to be, and I think we all delivered pretty well on it. It's hard because in this particular one, [director] Gore Verbinski and [cinematographer] Dariusz Wolski teamed up for the first three and then Darius stayed on to work with Rob Marshall, so there's been a certain lineage (laughs). For me personally as a DP it's obviously—you know I love Dariusz's work in the past on the *Pirates* films and I think there's similar styles and things we kind of share aesthetically in general, so it was a pleasure to kind of move into this project knowing that my taste level was similar to his and hopefully that I would do as good as or better than he's done to date.



Image via Disney

**Yeah I mean you think about especially Gore's movies in particular, it's visually astounding. When you're first approached to shoot a *Pirates* film is it daunting or exciting?**

CAMERON: You know I think it's both daunting and exciting, the prospect of photographing a franchise film like *Pirates*. Certainly you'll see massive CG sequences but there's also massive live-action sequences. They're big scenes, they're big set pieces, and there's stuff that's digitally enhanced by CG. Fortunately there's the budget to support and do these sequences correctly, I mean obviously we start with a lot of pre-vis and storyboarding sequences, kind of collaboration to come up with the best ideas and make those sequences as impactful as possible. But yeah, it is a bit crazy when you drive down a dirt road and you pass a couple trees and you take a turn and you see tents larger than any circus you've ever seen and trucks, endless rows of trucks, and a massive location and people dressed in period outfits and a dozen actor trailers and camera trucks. Definitely on pressure there for sure (laughs).

**Of course not. We've seen in the trailers that Javier Bardem's character in his crew have this really neat effect where it looks like they're under water. How did you approach shooting the practical element of that?**

CAMERON: Javier's character is the most fabulous character. He's been a wonderful addition to the franchise and part of his character he's sort of stuck in this spell and part of the effect within the spell is that his hair has this kind of slow-motion vibe to it. The hair is obviously done CG and practically the prosthetic on his face is almost complete except for the hair on top, so we just have thoughts about framing and trying to keep certain backgrounds not too busy behind his head knowing that hair would be floating around. We were aware of it but we certainly didn't let it drive the shot.

**You also worked with drone technology, which is becoming a more frequently used tool. Is that tech able to match the visual quality of something more traditional? What's your take on drone photography?**

CAMERON: Well I recommended doing some drone photography as soon as I knew the methodology would keep the big ships on gimbles against massive greenscreen background. Traditionally if we were at sea we'd be able to do an aerial shot coming from a mile out and swoop down by the ship and go by, and often times maybe it'd be a CG tradeoff with a crane shot we'd do on a boat or something and tie it into a closeup on the ship. The good news with the drones is I was able to take the ship a quarter of a mile out and fly it right into the ship and fly it right over and into a closeup of Johnny Depp or another actor. That's just something you couldn't do with an aerial shot, so it was pretty exciting to have the tool to do new photography in and around these ships.

Fortunately I found a company down in Melbourne called XM2 and I contacted them early in pre and talked to them about the idea of using an Alexa M on a drone and all their ships were fairly small, and basically they flew the Red camera for projects up until then. The ALEXA M is probably about two to three times the size and weight of the Red, so we did our R&D and found out that in fact if we scaled down the camera as much as possible and used a certain type of lens we could keep the weight below the Australian regulation, which was about 65 pounds. So we built a ship and XM2 built a ship for the ALEXA M and we trained the pilots and the operators for a number of days on one of our locations of the Caribbean town there. It's very hard to bring people into the kind of pace and style of principal photography if you're not used to it, and fortunately we had a great Australian crew but my experience with drone crews around the world is they tend not to have the experience with speed and execution on a film this size. Basically I had to train this guys so they were ready and could fly this ship, do one or two takes, get it, and be done with it. There was no three or four takes or anything like that unless it was for an actor. So we trained the guys well and they executed extremely well. I think there was a reluctance from the directors and everybody from the beginning about the use of drones, and all it took was a few shots wrapping around the ship and everybody loved it. Jerry Bruckheimer and the studio supported it, so we kept it on for the show.



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### **Now having used them, are drones something you'd like to use more of going forward?**

CAMERON: I didn't use it on *The Commuter*, but for me personally I'll use drones in the future for sure. It doesn't necessarily replace a traditional aerial shot, but it certainly is introducing a new type of photography that we're seeing in both film and television. You can get a drone much closer to people, you can get a drone much closer to a car, you can do shots very quickly that normally would take second unit or aerial unit an additional day or half day of photography. You can now just fly a drone and get one or two shots with principal actors on location, so there's a lot of advantages to doing it right. But what we're seeing is as the people owning and running the drone companies are getting more professional, obviously safety and certain regulations with the FAA are pretty stringent, so it's not inexpensive the way it used to be in the beginning. We're finding more experienced pilots that were actually former helicopter pilots, aerial DPs are now operating drones, so it's becoming



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so it's not inexpensive the way it used to be in the beginning. We're finding more experienced pilots that were actually former helicopter pilots, aerial DPs are now operating drones, so it's becoming

more professional hence more expensive, but it's certainly going in the right direction for us to use more in the future.

**I know films of this scale always go back for additional photography. What's that experience like as a cinematographer to have to go back after the fact and match what you did before?**

CAMERON: Oh it's very difficult doing additional photography. I think if you ask any director of photography, the hardest thing is to match yourself. I don't know why that is, but that's why we love second unit people who do additional photography and fortunately I had a small second unit on the film and I had some people helping with some of the additional photography so it wasn't so bad on this one. But it's just a big challenge because when we tend to do additional photography, it usually starts out as we're gonna do a small area and it'll be closeups, and then you realize for some directors—specifically these guys, Joachim and Espen—they tend to like wider lenses, so on a wide lens in a closeup if you hinge around 15 or 20 degrees, you're gonna see another massive background, which means potentially more set and/or more greenscreen and more lighting. So they were very supportive on the film here but we certainly go much bigger on additional photography than normal and enabled the directors and everyone to do the shots they wanted to do so I think it was a good call. It's always a tough one to match things later, I mean you basically have to take your lighting diagrams and match them. Even if you're doing a small footprint you have to match it or else it'll stick out like a sore thumb.

**I can imagine. Well you also shot the pilot for *Westworld*, which I thought was terrific and really set the series off on a great path. What was that experience like and how does the TV experience differ from film for a cinematographer?**

CAMERON: I mean for me working on *Westworld* was a great opportunity. I worked with co-creator and showrunner Jonathan Nolan and his wife Lisa Joy, co-creator and writer as well, and from the onset I didn't really see the difference. I didn't think of it as doing television or feature. I knew the expectations were high on the project and we were shooting on film and the cast was gonna be an A-level cast and



we were gonna build a Western town and a good number of sets that they could use for the series, so there was a lot of pressure to put together everything from the actual operation center in the Westworld park all the way to the Western town in Santa Clarita and all the tie-ins to Mojave Utah with horses riding and reverse angles with one set wall to tie in a background. There was kind of an expectation overall to give that project a big cinematic feel, and it's kind of the same way you would on a smaller film I think, or certainly television project. The standard for specifically cable TV and now we're seeing it with network TV even more is the visual bar gets set higher every year, so we're seeing projects on HBO, Showtime, and Netflix etc. that look as good or better than a lot of feature films out there. There's a lot of talented people working in that arena, and we're seeing a lot of crossover of feature TV director of photography, so certainly the stigma of shooting television versions features is long gone.

**Absolutely. You see Rodrigo Prieto shooting a pilot for Martin Scorsese, which is insane.**

CAMERON: I know I mean it's crazy, Scorsese directing a pilot. I don't think we ever thought that would happen.

**You mention you guys shot *Westworld* on film, but you were also at the forefront of digital technology working on *Collateral*. What's it been like for you seeing the evolution over the last decade or so?**

CAMERON: Well I think it's been a challenging decade or so for the transition to digital capture in general. Looking back on *Collateral* I certainly approached the project as I wanted to shoot on the best stock I could find. What stock would be able to render the city in this kind of acidic, acrid, metallic, electronic vibe? Michael Mann had mentioned he had shot a couple scenes from *Ali* on the Sony 900 and he was producing a television show at the time they were shooting, testing on the Sony 900, so I did some tests and fortunately we had a 2K projector in a screening room available to us. We were able to directly color-correct and transfer the Sony 900 material and look at it against the various film stocks and chemical processes that had tried to emulate that look, and it became this pretty quick decision that the Sony 900 was the right stock. That was the way I looked at it, it wasn't beginning to shoot digitally although there was a little buzz about people considering shooting things digitally. *Star Wars* was gonna use it so the buzz was just starting, but for me it was just picking the right stock. For me it hasn't changed to this day. I get a project and I think about should I shoot it on film? What stock would I shoot it on? If I'm gonna shoot it digitally what camera would I shoot it on? It's the same thing with lenses. So basically it was more of a transition at that time for utilizing the technology that was best at the time.



Image via DreamWorks Pictures

**For sure. Well I'm curious, and I know you must get this question a lot, but if you were to offer some advice for burgeoning cinematographers, what would your biggest piece of advice be for people wanting to get into that field?**

CAMERON: I think the advice I'd give is to really don't be distracted by the technology and the push for 4K and HDR and the 8K and all the technology that seems to be driving a lot of manufacturers. Just think about conceptualization and visualization and how you're gonna execute your images. Certainly you need to learn a good amount of the technology, you don't need to know it all. Digitally you need to know how to manage your tables and your looks and how to carry that all the way through post-production, but you don't really need to know a lot more than that and there's certainly the opportunity to concentrate on things creatively. That's the direction I think everybody needs to stick to. Be disciplined and work hard morning, noon, and night and don't take no for an answer (laughs).

**I think that's sound advice. And I know you have *The Commuter* coming up. Is there anything you can tease about that?**

CAMERON: All I can say is working with Jaume Collet-Serra was a great opportunity. He's got a lot of great creative energy and he's got a great relationship with Liam, and we're trying to elevate the film as much as possible. It was a great little ride shooting it.

*Pirates of the Caribbean: Dead Men Tell No Tales* opens in theaters on May 26th.

