WWD

The Mylo Driver bag by Bolt Threads and Chester Wallace.

FASHION

This $400 Tote Is Made of Mushrooms, Not Leather

- Bolt Threads has launched its first commercialized Mylo tote, made using mycelium, the root structure of a mushroom.

BY **KATYA FOREMAN**

PARIS – Lab-grown alternatives to leather are inching closer to becoming a market reality. Among the latest advances in the field, Californian materials innovation start-up Bolt Threads has launched the first "commercially available" product made from Mylo, a leatherlike material made using mycelium, the underground root structure of a mushroom.

Available for preorder today on Kickstarter is a utilitarian unisex tote made from the biomaterial, designed with Portland-based brand Chester Wallace. Deliveries will begin in spring 2019.

It's just a taste of things to come. The Mylo material was already used in the Falabella Prototype 1 handbag designed by Stella McCartney, on display in the V&A show "Fashioned From Nature" in London. But Bolt Threads is still in the process of refining and perfecting the process before it can produce big-volume commercial quantities.

"There is incredible demand out there for leather alternatives that are not a petro-chemical," said Jamie Bainbridge, vice president of product development at Bolt Threads, adding that Mylo in the near future will pop up in a number of segments, not just the leather goods field.

Known for its synthetic spider silk, a silk protein created through a process of fermentation, Bolt Threads has emerged as one of the most prominent players in the biomaterials sector. The Emeryville, Calif.-based company, which in July 2017 acquired outdoor-apparel brand Best Made Co., raised over $200 million in funding from investors including Founders Fund, Formation 8 and Baillie Gifford.

When asked if the Mylo Driver bag resembled classic leather, Bainbridge compared it to a piece of aged leather in aspect, only with no grain. It also feels similar to leather, she said. "What's funny is when people pick it up, they feel it and I think the first perception is, 'I'm feeling leather,' but there's this quizzical look," she said.

"Then they do what people always do, which is to sniff it, because humans have this association with the smell of fine leather, and it smells a little different from that. And then they're really curious about what it is," she added. "It's a process of discovery for the consumer."

Bolt Thread's Jamie Bainbridge.

The design is available in three tiers, going from $400 for the basic version, limited to 100 editions, to $1,000 with personalized embossed initials, a Mylo pouch and a tour with the Bolt Threads team at the Bolt Threads facility thrown in.

Bainbridge talked to WWD about the company's growing ambitions in the field of biomaterials.

WWD: Why did you choose to collaborate with Chester Wallace for this project over one of the major established brands?

Jamie Bainbridge: It's a company that I've known for a while. [Its founder] Patrick Long designs essential, functional, beautiful bags. I thought of him because he's such a thoughtful designer, he's very experienced in product design. Because it is such a limited production, the project lends itself to working with him.

WWD: What are the challenges in scaling up the Mylo material?

J.B.: We are licensing the technology from the company that started it, Ecovative Design, and we are trying to build facilities and perfect the process. There's a lot of science that goes into taking a wild mushroom as it grows in the forest and producing it in a lab. This product is a wild strain of mushroom grown in controlled conditions to create this material. The mushroom wants to do what the mushroom wants to do, and we have to give it exactly the conditions it needs to grow the way we need it to grow.

WWD: How will this material age compared to classic leather?

J.B.: We've made some wristbands out of it that we've been wearing for a couple of months now. Like leather, it ages gracefully. The material takes on a patina and becomes more soft and supple.

WWD: What are your ambitions with regards to entering the leather goods industry?

J.B.: Once we get this up and running in commercial quantities, we see doing products in partnership with people, limited-edition collaborations and perhaps doing our own products. We see it getting out in the world in a big way.

WWD: What is the main motive for developing this material?

J.B.: For us as a company, we're fascinated by all sorts of biomaterials. We have a team of biologists who just love the challenge of taking on a new organism and trying to really understand it deeply. But we also believe that the world can't support the intense farming required to rear cattle for much longer....We love the idea of being able to displace that big environmental load with something that is much lighter in terms of impact.

WWD: Are you looking to introduce something that mimics classic leather?

J.B.: I wouldn't say we're looking to do that. When you touch this material, it will remind you of leather, but we're not necessarily looking to displace the leather that is in the market right now. This is an entirely new material. It has the ability to behave a little bit differently from leather, and that is going to capture people's imaginations.

WWD: For the new materials industry, do all the solutions lie in nature?

J.B.: Absolutely, we're fascinated by biomimicry. All of the problems have been solved in nature, and so elegantly. To be able to study those elegant solutions and then try to figure out how we can do those ourselves is what motivates us. We are looking at a large number of other things that we're developing in-house.

WWD: In terms of perceptions of luxury for the consumer, what are the challenges with biomaterials?

J.B.: I think the luxury end of the consumer market is always a high bar to hit. You certainly don't make it into that end of things easily without really providing the consumer with both beauty and value.

Stella [McCartney] has done an incredible job in changing perceptions there by showing people you can really have beautiful things without using animals to make them. I think there's a big interest in the luxury market for non-animal derived products, it marks a big shift.

WWD: Do you think new materials like Mylo, made without using animal byproducts, will resonate in particular with Millennials?

J.B.: If you look at who it is that supports innovations on Kickstarter, it would definitely be that group of people. We'll see with this first product. That's why we're doing it this way, because we really get a first piece of feedback from the marketplace on how people perceive it.

WWD: Can you term Mylo as a mushroom leather? In Europe they have introduced laws banning the use of the term vegan leather as it is considered misleading to the consumer....

J.B.: We would like the product to be known as Mylo, for that name to take over the terminology of mushroom leather.

WWD: How soon can we expect to see Mylo scaled up?

J.B.: We expect it to be scaled up in the next year; as we produce and satisfy this Kickstarter campaign, at the same time we're doing the work to take this to a larger scale.

WWD: And you're offering tours of the Bolt Threads facility. It all sounds very Willy Wonka.

J.B.: Yes, to only 10 people. It's a really fascinating place. If you toured the Bolt Threads site, you'd kind of come away with that feeling.

WWD: Is a revolution under way for the materials industry?

J.B.: From our perspective, yes. We are seeing what we can do in mimicking what nature has done and we're looking for new ways to manufacture things that are less resource-intensive and have a lighter footprint on the earth. All of these biomaterials that we work with have the promise of doing that. ■