

◀ The high-tech future of fashion may lie in millenia-old mushrooms.



Vegan En Vogue

Designers are dumping fur, innovative companies are developing plant-based leathers, and flowers are replacing feathers. Vegan fashion has come a long way since plasticky coats were the go-to option.

Author Mark Hawthorne explores the latest trends in apparel that make you feel as good as you look.

It was only a couple of decades ago that “vegan fashion” meant canvas sneakers, a belt made from a bicycle inner tube, and maybe a tragically mediocre PVC jacket. It was all in the name of compassion, of course, and it really wasn’t all that bad (especially the inner tube belt).

But we’ve come a long way since then, and today’s conscious consumer can choose from an expanding variety of footwear, garments, and accessories that are as #aesthetic as they are ethical. Moreover, major designers, department stores, and

fashion magazines have sworn off fur, once a staple of catwalks and luxury department stores. It would seem that at long last, vegan fashion is moving from the margins to the mainstream.

COMPASSIONATE PIVOT

One measure of just how much of an impact that animal-free apparel has is the global vegan women’s fashion market, which was valued at \$396 billion in 2019 and is projected to be worth more than \$1 trillion by 2027. And while revenue in the overall

women's fashion market is expected to grow annually between three and five percent over the next few years, vegan women's fashion is on course to increase by nearly 14 percent.

But of course, the clearest evidence of vegan fashion's success is that it is everywhere, and it's no accident that its rise in popularity coincides with the worldwide interest in consumerism that has a positive social, economic, and environmental impact—including vegan eating. The number of people identifying as vegan in Britain in 2020 increased by 40 percent, for instance, while the US vegan population surged by a whopping 300 percent over the last 15 years.

Because veganism isn't just about food, what to wear is often the second decision those who eschew meat consider. Joshua Katcher, founder of the vegan fashion line Brave GentleMan, believes it's a critical consideration. "Fashion is an industry that most people perceive as being about surface and vanity and frivolity," he says. "But the reality is that it impacts millions of workers, billions of animals, and ecosystems everywhere. It's just as serious as the food system. But because it's fashion, it gets a bad rap and people don't take it seriously."

And while Fashion Week, where top designers and brands showcase their latest collections in cities around the world, has traditionally welcomed animal furs, events in some locations—including London, Stockholm, Amsterdam, and Melbourne—have shed their inclusion. "I believe that fashion houses are following a strong societal shift: consumers demand it," says Emmanuelle Rienda, who for more than a decade had a successful career representing French designers in the US, many of whom were using leather, wool, silk, and fur. "I started to question the unethical treatment of animals within the supply chain and its huge impact on the environment and worker's rights." This ethical awakening led Rienda to launch Vegan Fashion Week in Los Angeles in 2019. "Today, Vegan Fashion Week is a lot stronger than LA Fashion Week in the mainstream media—proof that there is a growing interest for our message."

FAUX SURE

A major hurdle for high-end vegan fashion has always been the perception that faux alternatives of animal-based materials—whether it's fur, leather, or wool—are both shabby and unsustainable. Animal furs, in particular, historically offered wearers an aura of prestige, while fashionistas as far back as the



► Ecopel's revolutionary plant-based fur is made from corn-based ingredients, and produces 63 percent fewer emissions than traditional faux fur.

19th century claimed that donning anything but real fur was practically shameful. "At all times, imitation fur is a dangerous investment," opined *Harper's Bazaar* in 1899. When the environment became a widespread issue in the 1970s, the fur industry assured the public that its product was an eco-friendlier choice than synthetic furs, which have traditionally been made from non-renewable petroleum-derived plastics.

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Not only is the false narrative of animal furs as "natural" remarkably disingenuous—in addition to the cruelty involved, a toxic stew of formaldehyde, chromium, and other chemicals are used in the process of making furs to prevent their decay—but the ecological future of fake fur is looking healthier. Ecopel, a Franco-Chinese company specializing in luxury faux furs, recently developed a partially plant-based fur called Koba that can be recycled, which keeps its coats out of landfills and makes the fabric more attractive to eco-conscious designers. "In a time when faux fur is perhaps the most desirable it's ever been—as animal fur has fallen completely out of fashion—Ecopel is showing just how innovative this field can be," says Sascha Camilli, founder of the world's first digital

vegan fashion publication, *Vilda Magazine*. "I think we will see great things from them going forward."

Much more ubiquitous than fur, of course, is leather, and a high-quality, highly durable alternative to animal-based skin has long been the holy grail of both vegan consumers and fashion-forward designers. "It was actually working in the fashion industry, visiting tanneries in 2006 and 2007 that prompted me to go vegan and cut out leather," says Elizabeth Olsen, who founded OLSENHAUS the following year to help bring style to vegan shoes.

Synthetic leathers have faced many of the same criticisms as fake fur, including the reliance on fossil fuels. The two most popular vegan alternatives have been polyvinyl chloride (PVC) and polyurethane (PU leather), and neither is good for the environment.

The response from visionaries in the vegan-innovation space has been a variety of plant-based leathers, made from such unlikely ingredients as tree bark, apples, and even weeds (nettles, to be exact). One biofabric with especially wearable potential is leather made from mycelium, the underground rootlike structure from which mushrooms grow. It's a solution to the ever-growing problem of a world population that is ever growing. "What worked for 1 billion people will not work for 10 billion on this planet," says Dan Widmaier, PhD, a biochemist and CEO of Bolt Threads, a San Francisco Bay Area company he founded in 2009 to find alternatives that will reduce the fashion industry's carbon footprint. "For example, today people have five times more clothing items than people did in 1980. While consumption needs to decrease, people are going to continue to need clothes and shoes, which means we are in dire need of smarter

◀ Paprika
Pineapple
Trench
Coat by
Mariam Al
Sibai

7 SUSTAINABLE (AND SURPRISING) VEGAN FABRICS

WHEN IT COMES to old fabric faithfuls, in the vegan world, there's hemp, linen, and organic cotton. But a new wave of up-and-coming plant sources are being transformed into sustainable, animal-free materials that are primed to make a major impact on the industry.

1 BANANA: This fruit has a relatively low environmental impact and can be used to create textiles woven from its otherwise discarded stalks and a leather-like fabric from the peels.



Laflöre cork
leather
purse

2 COCONUT: The prevailing belief used to be that coconuts were great for making rope and mattresses, but not clothing. Now, the Australia-based biomaterial technology company Nanollose has created a process for spinning coconut waste into wearable garments.

3 CORK: Here's a leather alternative that is natural (obtained from cork trees), sustainable (harvested without the felling of a single tree), and easy to clean (go ahead, throw it into the washing machine). It's great for shoes, hats, wallets, bags, and belts.

4 LOTUS SILK: Sometimes called lotus thread, this luxury material is created from the delicate stem fibers of lotus plants. Technically not a new fabric—it was reportedly invented in Myanmar in the early 20th century—this substitute for insect-derived silk is nonetheless gaining

popularity among designers in the Global North.

5 PIÑATEX: This material made from the leaves of pineapples is a supple, breathable, and water-resistant alternative to leather. Inventor Dr. Carmen Hijosa was appalled by the conditions in leather tanneries, so she created a non-toxic substitute.

6 SEAWEED: From superfood to super fabric, seaweed is incredibly versatile. Fashion innovators are drying seaweed and then crushing it into cellulose fibers using nanotechnology. The result is a soft, silk-like textile that can be used to create dresses, activewear, and more.

7 SOYBEANS: What could be more vegan than wearing clothes made from the debris of tofu manufacturing? Plus, soy fabric is warm, highly elastic, doesn't wrinkle, and won't shrink.

technologies and solutions, and we can create those solutions.”

Bolt Threads' groundbreaking mycelium-based product is called Mylo, which is grown in a lab using the same process that occurs on a forest floor. The company starts with mycelial cells and feeds them sawdust and other organic material, then places all of that in a tray while controlling the humidity and temperature, among other variables. “The mycelium grows into a foamy layer and can be harvested in fewer than two weeks,” says Widmaier, adding that the surprisingly leather-like result is soft, supple, and breathable. Designer Stella McCartney debuted Mylo designs in March of 2021. “This is the future of fashion,” she told *Vogue*. “If we can get this right, then we can really make a huge impact on the planet.”

HEART ON YOUR SLEEVE

Like fur and leather, wool is a product of animal cruelty, though the abuse is generally less understood since sheep—from whom most wool comes—are not killed right away. For them, the slaughterhouse comes later, when their bodies are exhausted and their wool production has declined, which is usually when they are between five and six years old. In the meantime, they are forced to endure an annual shearing that can leave them exposed to extreme temperatures. And because sheep bred for wool are prone to flystrike, ranchers in Australia's wool industry use shears to cut two large swaths of skin from beneath the sheep's tail; anesthesia is almost never used.

The knowledge of such cruelty has left many vegans somewhat out in the cold. For years, the main substitute for wool has been cotton, and for many consumers, it's a functional alternative in garments like coats, flannel shirts, sweaters, socks, and business suits. Yet cotton doesn't keep you as warm as wool, especially when it gets wet. Polyester is another popular option, but it's basically just another form of plastic.

Coming onto the vegan landscape now is Weganool, a fabric made from a wild flowering plant called Calotropis, a versatile plant native to Asia. In 2017, fashion veteran Gowri Shankar—who founded a company called Faborg in India with his wife, Elen Tsopp—noticed sunbirds using Calotropis fibers for their winter nests. Turns out that not only are the cellulose fibers hollow like cashmere wool, but they can be spun into yarn. And Calotropis grows in abundance in arid regions without irrigation. The vegan wool (made from 70 percent organic cotton and 30 percent Calo-

tropis plant) also creates income for local farmers and women in the southern Indian state of Tamil Nadu. Tsopp describes their product as softer than wool, warmer than cashmere, and kinder to the planet. “So far, the economy has been thriving by exploiting nature,” she says. “Now we have opportunities to create income streams that revive ecosystems and support rural communities in water-depleted areas where jobs are unsecured.”

Even more under the ethical radar than wool may be down—soft feathers that grow beneath the stiffer exterior feathers on ducks and geese and is used for their thermal properties in outerwear. Perhaps the most controversial aspect of this product is the practice of “live plucking”—akin to ripping out human hair. Ironically, the down industry touts “ethically sourced” feathers as only coming from birds who were killed for meat, though traceability continues to be a challenge.

Non-animal alternatives to down have been available for decades, but most are manufactured from polyester. That’s why a new material called FLWRDWN could have a real advantage. Developed by the science-forward brand PANGAIA, FLWRDWN is, as the name implies, made from the petals of wildflowers. Every jacket is filled with about one pound of dried biodegradable wildflowers, which are preserved in a biopolymer shell and infused with aerogel, a flexible, non-toxic webbing that gives the petals volume. It’s a combination that took fashion scientist Amanda Parkes, PhD, more than 10 years to perfect. “What we’ve created is a natural alternative that is also vegan,” she told the *Conscious Chatter* podcast, noting that it doesn’t use anything from an animal or rely on petrochemicals.

With so many exciting eco-friendly materials being developed, and so many designers embracing them, it’s clear that vegan fashion is transitioning from niche to normal. After all, sustainability will never go out of style. And as social media continues to expose fashion cruelties throughout the world, the ripple effect will be a wider demand for products that have no animal-based ingredients. “This is the new way of the fashion industry,” says Paula Maldonado, founder of the vegan fashion brand Dauntless. “We have seen the horror and cruelty behind sourcing animal byproducts, and the consumer will not stand for it anymore.”

Ultimately, adds Katcher, one of the most appealing aspects of vegan fashion is its versatility: it can be anything and look any way because it’s really about how the garments



▲ Stella McCartney mushroom leather MYLO purse

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were made. “It’s about systems, it’s about supply chain, and it’s about making better choices,” he says. “So, when you hear ‘vegan fashion,’ you shouldn’t associate it with the way something looks. It should simply be

associated with a supply chain that is more in line with the values that most people already share.”

It’s also about forming strong partnerships and creating an inviting environment, says Rienda. “I believe we must remain an inclusive movement and welcome each individual regardless of where they are in their sustainable journey. It is important to continue educating and inspiring the new generation by staying relevant and creative and by providing a strong platform.” Fueled by an expanding segment of conscious consumers and a new breed of designers, it’s just a matter of time before vegan fashion becomes simply fashion. **W**

MARK HAWTHORNE’s latest book is *The Way of the Rabbit* (markhawthorne.com).