Lifestyle

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SNEAKERS OF THE GODS

Carbon Footstrikes on the Evolutionary Trail

BY BYRON LAURSEN

Twenty years ago, most amateur sporting was done in canvas and rubber shoes loosely called "tennies" or "sneakers." But up in Eugene, Oregon, a popular track coach was promoting a new fitness discipline called jogging. Bill Bowerman, leader of the University of Oregon's powerhouse NCAA track squad, had induced local people of all ages and genders to trim their frames by shuffling at moderate pace around a track. It was a certified trend when *Life* magazine, in the Spring of 1963, sent a camera crew to the scene. Circling ahead of the pioneer jogging squads on a flatbed truck, they also drew flocks of freshman boys in leather oxfords, ties and white shirts, eager to make the pages of *Life*.

Jogging caught on. But oxfords didn't. As the army of run-for-your-lifers grew, common sneakers took the opportunity to evolve.

Puma and Adidas, a pair of German firms, were the major names in track shoes then. Adidas had made the shoes in which Jesse Owens won four gold medals during the 1936 Berlin Olympiad. Puma had been in business since 1948, producing the rarified, ultra-light footwear demanded by track competition.

When sneakers were crossbred with these track shoes, the results were lighter and more sophisticated than the former while more multi-purpose than the latter. They were cooler and more comfortable. They made sports performance easier, staved off injuries and generally kept one's dogs from barking. By the early Seventies, with jogging and other fitness activities on a wild upswing, Nike, New Balance and several other new firms joined the ranks of the Germans and those few established American sneaker companies — like Converse and Keds — in the running shoe market. By 1972 there were about twenty models to chose from. Today there are about three hundred. The National Sporting Goods Association pegs sports shoes as a $1.88 billion business annually, according to 1982 statistics. Only (only, he says!) $421 million is specifically spent on running shoes, a figure that has tripled in size since 1980. But the majority of all sports shoes is design-related to our current running shoes. Millions of research and development dollars have been spent by firms wanting to stay ahead of the volatile market. "Choosing a running shoe is like being in a candy store," says Angel Martinez, a marathon runner and representative of Reebok. "Trying everything that looks good can be hazardous to your health."

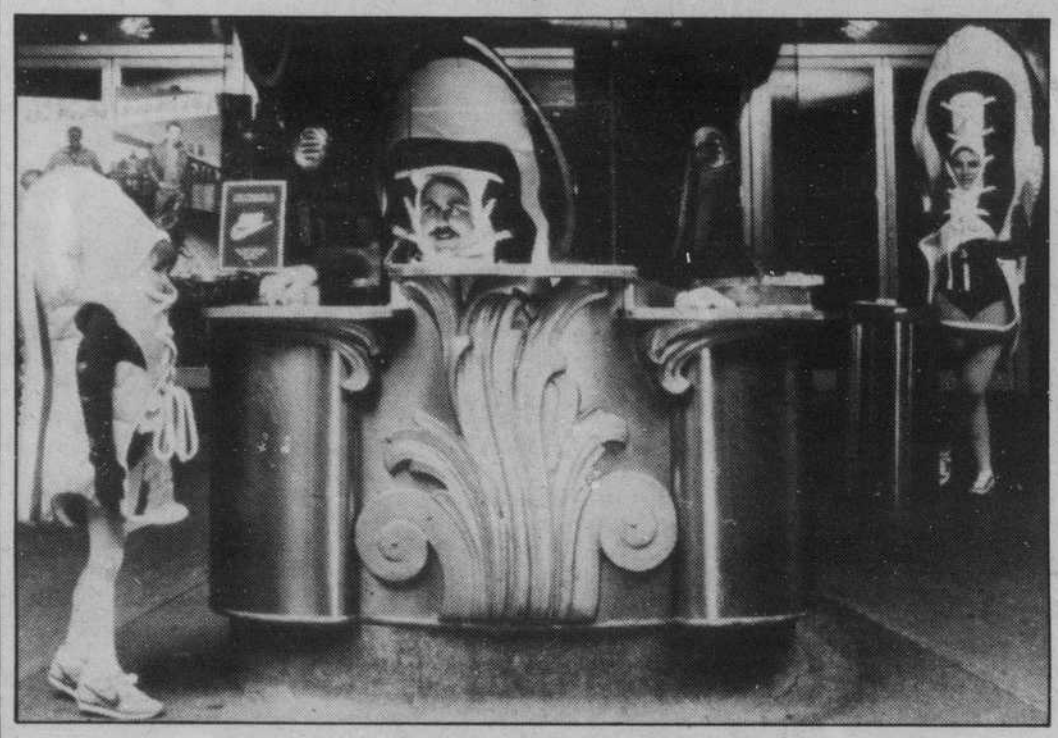
Section by section, here are some standards for choosing your shoes:

The Outer Sole smacks the ground repeatedly, so it must be tough and yet flexible. The best are of carbon black rubber compounds. EVA (ethyl vinyl acetate) and other cushiony compounds are also acceptable. They may wear more quickly, but they will be lighter than the carbon black models.

Waffle designs are the best cushions — which becomes important when you consider that each time a running foot lands, it's subjected to stress two to six times the runner's body weight. But the waffles wear quickly on pavement. Pavement is also hard on *you*, says orthopedic surgeon Dr. Ivan Higgins of Portland, Oregon, who has operated on more jogging-injured ankles and legs than he cares to remember.

While the waffles are best for grass and mud, channeled outersoles are the choice for general surfaces. They allow water to squeeze out sideways, reducing slippage on rainy days. But there should be at least a quarter-inch between channels, or else you may collect mudcakes.

Vans, which sells lots of tough sneakers to BMX (bicycle motocross) enthusiasts, has just entered the running shoe field with an outersole design that's rippled. It looks capable of edging you forward a smidgen with each stride. New Balance had a similar design on their prototypes ten years ago, but didn't retain it.



The Midsole and the Wedge are the thick, cushiony layer just above the outer sole. They need to be made of materials with good memory. Otherwise they'll gradually flatten out and leave your knees to do the shock absorption.

Squishy soft materal will probably lose its memory quickly. Test a pair of shoes by jumping on a hard surface. They should give slightly and rebound immediately. EVA is a typical component, but it can be softer or denser depending on how it is compounded. Some makers put a softer blend in the wedge and a harder one in the midsole. Polyurethane is an excellent midsole and wedge material, but it is more expensive.

Nike recently introduced a cushioning set-up they call Air Sole. It's a plastic tube system filled with inert gas. They claim 30 percent greater cushioning than EVA with no loss of memory after 500 miles.

Slip-Lasting is one construction technique, *Insole Board* is another. Each has its true believers and you may hear arguments favoring one over the other. An insole board is a semi-rigid, foot-shaped piece of either cellulose fibers or leather dust fibers, bonded in a glue. The upper and lower components of the shoe are glued to it. Some claim that it's a more solid construction, preventing twisting motion that may injure a foot. But Saucony, which placed two models in the top five on last year's *Runner's World* poll, makes slip-lasted shoes, as do some other respected manufacturers. Still others, like Brooks, make shoes with insole boards at the heel for strength and slip-lasted at the toe for flexiblity. Judge for yourself by seeing how stable the shoe feels when you make twisting and turning movements on a hard surface.

The Sock Liner, which sits directly beneath your foot, will probably be made of low-density EVA. Spongy, it will gradually conform to your foot shape. Cushioning value will dissipate, but the sock liner will absorb moisture and help "lock" your foot into the shoe.

The Upper is the most visible part of the shoe, the top and the sides. Colors of cinnabar, crimson, magenta or what have you, plus racy identi-logos, compete for your glances.

Leather and nylon are usually teamed for uppers. Nylon resists stretching, breathes well and dries easily, and won't cause abrasions. Leather, alone, can leave uncongenial raw spots on top of your toes, especially if it's lower-grade split-grain leather. Placement of leather should be at structurally important points like toes, heels and lacing areas. Leather that's used more extensively should be top quality, like the full-grain calf leather in Reebok's Freestyle and Ex-O-Fit models.

In better shoes the nylon uppers will be a sandwich of nylon tricot underneath, a layer of foam, and nylon mesh on the top side.

The Heel Counter is the back section, which must grip your heel snugly. It should be rather rigid, to minimize rolling and side-to-side motion. A weak heel counter could lead to an ankle sprain. Grab the counter, squeeze it, tug it. Pre-molded polyethylene and pre-molded woven nylon are typical materials here, but a solid feel is the most important standard.

The Sum of the Parts should be a shoe that looks close to faultless. Gluing shouldn't be sloppy, stitching should be just right.

"Make sure the shoes fit as you would like them to fit," advises Howard Sorofman of the Saucony r & d department. "Not every manufacturer can be perfect for everybody's feet, no matter how good their product." The overall sensation should be of well-cushioned stability at the heel, at the forefoot, everywhere.

Fortunately, there's a long list of manufacturers strong on quality and continued research. Brooks, which had its financial and quality control problems, was bought out a year ago by Wolverine and is back with a $250,000 research grant to Michigan State University's Biomechanics Research Lab. Greg Meyers won the 1983 Boston Marathon wearing Brooks shoes. Nike, with one of the highest research budgets in the industry, employs the venerable Coach Bowerman and boasts overall sales in the vicinity of $700 million. Adidas, headquartered in Germany, produces some 280,000 pairs of shoes *daily*. Puma, still a family business, has maintained a reputation for durability and excellent quality control.

Mizuno, which also produces some baseball gloves that look like samurai gear, has introduced what they call a "cassette" system of midsoles and outer soles. This allows you to custom order the cushioning capacity to your weight and running habits. Etonic espouses a reduced-mass heel which they claim provides weight reduction and longer wear. New Balance, an insurgent eleven-year-old American firm, has some of the handsomest color schemes and a midsole design wherein a horseshoe shape of harder EVA cradles the heel. Converse was the giant among basketball shoe manufacturers until the Running Shoe Revolution hit. Though playing catch-up ball nowadays, they have the advantage of a long-established distribution system and are promoting a very full line of shoes.

If the past twenty years of evolution have been feverish, what lies ahead? Hovercraft for the feet? Not likely. We'll probably see continued refinement of cushioning and construction. As the market expands — and even more so if it stops expanding — we'll see more aggressive promotion to establish brand preference. But knowledge of what makes a pair of shoes worth the price is more valuable than seeing ads or even guest appearances on the silver screen. Your brain knows how to find the marks of quality; your feet know what feels good. Let them collaborate on your next running shoe choice.

Hike Higher! Climb Faster!

BY BYRON LAURSEN

A fascinating spin-off from running shoe technology has recently emerged. Some professional mountaineers, weary from the heavy stompers they've trundled uphill with over the years, switched to climbing in top-quality running shoes. In so doing, they sacrificed some durability. But they showed running shoe manufacturers another opportunity for evolution.

New Balance, Nike and Brooks have all married sturdy, lug-soled bottoms to midsoles and uppers whose designs are influenced by running shoe technology. The results are like evolved variations of the "waffle stomper" boots that were very popular on campuses a few years ago. Lou Whittaker, who operates America's largest mountaineering guide service from the spectacular slopes of Washington's Mount Rainier, collaborated with New Balance on their entry, called the Rainier.

Off to test the product against Mt. Everest this March, Whittaker says the new designs will "make every 8-pound leather leg killer obsolete." A Lady Rainier model is also available.

Nike has two stylish market entries, the Approach (hightop) and Lava Dome (lowcut). Brooks, which will compete against more conventional hikers from its Wolverine parent company, calls its line Geotech Hikers. It includes the Explorer, with a 7-inch hightop; the Challenger, with a 6-inch hightop; and the Pathfinder, which is lowcut.

As much as these new hiking boots may be a boon to mountaineers and their overtaxed feet, the manufacturers are even more excited that they may become standard knockabout campus wear. The potential for this looks good, especially in parts of the country where rain and snow dominate the winter months.