

MARKETPLACE

THE WALL STREET JOURNAL.

© 2005 Dow Jones & Company. All Rights Reserved.

FRIDAY, AUGUST 5, 2005 B1

SCIENCE JOURNAL

By SHARON BEGLEY

Very Old Eggs Reveal A Fast, Changing Path Through Evolution

BIOLGISTS STUDYING how species change over the eons have always been hampered by the little problem of previous generations of a species being, well, dead. Sure, you can infer something about what a creature was like from fossils, but fossils generally fail to preserve much except bone. As a result, some of an animal's most interesting features vanish into the dust of time.

But these days, not even death is forever. A few years ago, biologist W. Charles Kerfoot was examining "cores"—basically, muck deposited decades earlier—in a Michigan lake. Lo and behold, he and his colleagues discovered eggs, and not just any eggs. They had been laid long ago by tiny creatures (mostly insects and crustaceans) that no longer lived in the lake. Even better, there was still life in the eggs. Under the right conditions, they would hatch.

"We knew right away that we were founding a whole new field," says Prof. Kerfoot of Michigan Technological University, Houghton. "I call it 'resurrection ecology.'" By hatching the eggs one muddy layer at a time, he realized, he could compare one generation with another to investigate evolutionary change.

It has always struck me as odd that evolutionary biology is caricatured by opponents as being static, a tower of unchanging (and unchangeable) dogma dating from Darwin. In fact, it is full of competing ideas, new discoveries and bickering scientists.

IN HIS RESURRECTION work, Prof. Kerfoot focuses on eggs of a tiny water flea, *Daphnia retrocurva*, from Portage Lake. He sieves them out of the deep muck, pops them into an incubator, and is a proud papa a few days later. "We've resurrected eggs from 300 years ago," he says. "That's 3,000 generations, equivalent to 120,000 years of evolution for humans."

And evolve is just what the little guys did. *Daphnia* share Portage Lake with creatures great and small, including predators, such as the shrimp-like *Leptodora*. Prof. Kerfoot wondered whether the *daphnia* were doing something that biologists had hypothesized, but had struggled to prove—namely, that the Red Queen in "Alice in Wonderland" was describing evolution when she told Alice, "It takes all the running you can do, to keep in the same place."

In evolutionary biology, the Red Queen hypothesis means predators and prey must evolve like heck just to keep from falling behind (and to remain able to hunt or elude capture).

Sure enough, *daphnia* eggs taken from muck with a high population of predators hatched into veritable warriors: They had long spikes on their tails and an impressive helmet, the better to make themselves too prickly to eat. "But as predators became less abundant, spine length and helmets became smaller," says Prof. Kerfoot. "Evidence for the Red Queen is very strong here. It looks like these populations really are changing just to stay in place."

He isn't the only scientist tinkering with classic Darwinism. The reigning theory of the molecular basis of evolution is that whether a mutation takes hold depends solely on natural selection: beneficial mutations last, detrimental ones disappear. But something else may be at work.

IF A SLEW of mutations show up at once, more of them endure, scientists led by Bruce Lahn of the University of Chicago report in the July issue of *Trends in Genetics*. In my world, that's like an editor flooding you with dozens of suggestions for changes in your column. You're unable to fend them off, so more survive than if the requests come one-by-one over time.

Thousands of scientific papers presume that the fraction of retained mutations depends solely on how beneficial they are. "This theory has been the workhorse of molecular evolution," says Prof. Lahn. His discovery that a gene accepts more mutations when many hit at once is counterintuitive and controversial; a handful of journals actually rejected his paper. But if he is right, the molecular underpinning of evolutionary biology is itself in need of mutation.

Another pillar of evolution is that natural selection sculpts species toward some ideal fitness. In fact, what's "fit" is a matter of opinion. Consider the males of a little reptile called the side-blotched lizard, which come in three kinds. Orange-throated giants beat up on their diminutive blue-throated rivals, which in turn lord it over tiny yellow-throated guys. You'd think the yellows would eventually die out.

But natural selection is more forgiving than that. The yellows are so beneath the contempt of the oranges that they are able to steal assignments with females attracted to the oranges' territory. As a result, the yellows reproduce and survive.

Just as the game rock-paper-scissors has no single winning strategy—it depends what your opponents choose—so in lizard-dom there is more than one route to evolutionary fitness.

Critics contend that evolutionary biology is a haughty club that forces members "to circle the wagons against any and all would-be challengers, and to achieve consensus on the most contentious issues." Michael Shermer, director of the Skeptics Society, has written. "This conclusion is so wrong that it cannot have been made by anyone who has ever attended a scientific conference," or dipped so much as a toe into the roiling waters of evolutionary research.

You can email me at sciencejournal@wsj.com.



Shane Harrison

Velvet

Fall's New Fashion Sheen

A Fabric Once Synonymous With Lounge Acts Suddenly Rubs Designers the Right Way

By TERI AGINS

AT THE PEAK of its popularity in the 1970s, velvet was considered a stiff, formal fabric that conjured Las Vegas lounge acts and the Christmas tartans of Junior Leaguers.

Now, after a long hiatus, velvet is re-emerging as a serious fall fashion novelty—for both men and women. With the season's first deliveries, men's departments at Saks Fifth Avenue, Bloomingdale's and Neiman Marcus soon will team with velvet blazers—mainly in black, brown, or burgundy. Designed to be worn with an open-collar shirt and jeans, the look is meant to give men "a new uniform to replace the tweed blazer," says Kal Ruttenstein, fashion director at Bloomingdale's.

At Barneys New York, meanwhile, the plush fabric showed such promise with men last year that the specialty store is doubling its stock: one in every five blazers will be velvet.

Women, too, will find that everything from jackets and pants to shoes and handbags has a velvety touch. Designers such as Prada, Oscar de la Renta, Michael Kors, Giorgio Armani and Louis Vuitton all are showing velvet versions of the little black dress. At the mass-market level, malls will be swathed in affordable renditions, including Gap Inc.'s \$78 Victorian-style velvet jacket for women and J.C. Penney Co.'s \$49 women's blazers in turquoise, orange, herb green and chocolate.

Historically, rich and heavy velvet suggested opulence, as in ceremonial robes worn by royalty. But velvet went pop in the 1970s, the decade of the powder blue velvet tuxedo and ruffled shirts worn by the likes of such nightclub performers as Sammy Davis Jr. and Robert Goulet. Despite the resurgence of velvet track suits in 2002, "You couldn't have mentioned velvet to men three years ago," says Tom Kalendarian, executive vice president at Barneys.

This time around, velvet has lost its formality. The big fabric mills are giving velvet a distressed, puckered patina—just as they have with denim and corduroy in recent years. Unlike the silk velvet of king's robes, much the new velvet will come in 100% cotton, sometimes with a smidgen of stretch. Makers say cotton velvet is both less expensive and more durable than the silk or

Please Turn to Page B2, Column 4

Blazers from Original Penguin (left) and Gap (above).

Crush: A shoe from Italy's Bottega Veneta

Gucci's new horsebit tote gets the soft-touch treatment.

The Nap That Came Back: (From top) Crooners Kenny Rogers in '79, Sammy Davis Jr. in '71 and Jon Bon Jovi last year.

Spielberg Link Boosts Value of DreamWorks

By MERISSA MARR
And KATE KELLY

HOW MUCH is Steven Spielberg worth? That's the billion-dollar question for NBC Universal as it negotiates to buy DreamWorks SKG.

NBC Universal, the entertainment unit of General Electric Co., has entered a two-month period of exclusive discussions in its effort to acquire DreamWorks. The deal could value the movie studio co-founded a decade ago by Mr. Spielberg at considerably north of \$1 billion, people familiar with the matter have said.

Locking up a single director—even one as celebrated as Mr. Spielberg—would seem to be little justification for such a big transaction. But the opportunity to buy DreamWorks comes at a time when Universal is particularly eager to bulk up its movie slate because the company, after years of a partnership with rival Paramount Pictures, is heading toward the creation of its own international movie-distribution network.

And for that, Universal may need both more movies and marquee attractions—which is where Mr. Spielberg comes in. While the DreamWorks Animation titles that Universal would distribute may be more lucrative over the long run, Mr. Spielberg provides a global

FILM TITLE	DOMESTIC GROSS IN MILLIONS	STUDIO
'E.T.: The Extra-Terrestrial'	\$435	Universal
'Jurassic Park'	357	Universal
'JAWS'	260	Universal
'Raiders Of The Lost Ark'	245	Paramount
'The Lost World: Jurassic Park'	229	Universal
'War Of The Worlds'	218	Paramount DreamWorks
'Saving Private Ryan'	216	DreamWorks Paramount
'Indiana Jones, Last Crusade'	197	Paramount
'Indiana Jones, Temple Of Doom'	180	Paramount
'Catch Me If You Can'	165	DreamWorks

*Includes all re-issues
Note: Grosses through July 31, 2005 Source: Exhibitor Relations

brand of his own that would help Universal gain leverage with theater owners around the world. For example, Mr. Spielberg's current "War of the Worlds"—a joint venture between DreamWorks and Paramount—has sold more than \$530 million of tickets world-wide, with more than \$310 million of the take coming from outside North America. Universal is already in advanced discussions with Viacom Inc.'s Paramount that could

soon lead to a deal that would dissolve their jointly owned international distribution network and divvy up the operations between them, according to people familiar with the situation.

More broadly, Universal's hot pursuit of DreamWorks highlights the tough demands of making movies today. A bitter cocktail of decreasing movie attendance and increasing production costs has made filmmaking an increasingly high-risk business for even the biggest studios—yet another inducement to seek the services of Mr. Spielberg, who is as close to a surefire box-office bet as any director in Hollywood.

DreamWorks was founded in 1994 by Mr. Spielberg, music mogul David Geffen and former Walt Disney Co. executive Jeffrey Katzenberg as a multimedia entertainment company with far-reaching operations. But a number of false starts and the spinoff late last year of DreamWorks Animation, which Mr. Katzenberg now runs, have made the co-founders anxious to sell their scaled-back live-action company.

In particular, the 58-year-old Mr. Spielberg favors a deal with Universal, the people say, where his roots as a director run deep. His early success came from sneaking into the Universal lot and getting the studio librarian to show a short he had made, called "Amblin," to a studio executive. He later named his production company after that short. Some of Mr. Spielberg's biggest hits, including "E.T.," "Jaws" and "Back to the Future," which he produced, were

Please Turn to Page B2, Column 6

Microsoft Picks A Wal-Mart Vet To Be Its No. 3

By ROBERT A. GUTH
And ANN ZIMMERMAN

MICROSOFT CORP. has reached into retailing to find new leadership.

The software giant named B. Kevin Turner, a top executive of Wal-Mart Stores Inc., as its chief operating officer, a position that will place him in charge of sales at a time when relationships with large corporate customers are becoming more critical than ever for Microsoft's growth.

Mr. Turner, who is filling a position that has been vacant since 2002, will be the No. 3 executive behind Chairman Bill Gates and Chief Executive Steve Ballmer. He starts Sept. 8, and will report to Mr. Ballmer.

The 19-year Wal-Mart veteran is 40 years old, and he rose from cashier to chief executive of the company's \$37 billion Sam's Club unit. He will oversee Microsoft's sales and marketing unit in addition to the company's information technology and fulfillment operations.

Mr. Turner, whose pay packet includes a \$7 million signing bonus, will take most of his responsibilities from Kevin Johnson, who is Microsoft's group vice president of world-wide sales, marketing and services. A 13-year Microsoft veteran, Mr. Johnson will assume a new senior executive role at the company that is to be identified within 30 days.

A Microsoft spokesman said that he couldn't comment on Mr. Johnson's new role at the company and that senior executives including Mr. Ballmer weren't available to comment on the management changes.

Wal-Mart, meanwhile, named Doug McMillon, 38, as president and chief executive of Sam's Club. Mr. Turner takes the top sales job at Microsoft as the company's customers have more power than ever. The slowdown in technology spending since the 1990s has given companies a stronger hand in pushing for better deals, service and attention. The sales arm that Mr. Turner will oversee has grappled with the changes, moving through several reorganizations in recent years and fielding complaints about security and other problems with Microsoft's wares.

He is the latest in a series of outsiders Microsoft has hired. Please Turn to Page B2, Column 3

How Lilly Influences What Prescribers Say About Cymbalta

By SARAH RUBENSTEIN
THE WALL STREET JOURNAL ONLINE

FROM TV COMMERCIALS to pitches in doctors' offices, drug companies try to cast their products in the best possible light. Some use a far less visible approach: contractual restrictions on what insurers, hospitals and other health facilities can tell doctors about certain drugs.

Drug makers commonly offer price breaks to insurers, hospitals and other medical facilities. In exchange, they often get favorable placement on drug formularies, the lists these entities use to encourage prescriptions of certain products. Some of the contracts go further, restricting insurers and medical organizations from making unflattering statements about the costs and risks of drugs when they communicate with health practitioners.

A case in point is the discount contract Eli Lilly & Co. has offered health facilities in connection with Cymbalta, an antidepressant that the Food and Drug Administration approved last year and that faces competition in some cases from cheaper generics. The contract illustrates tactics that some insurers and prescribers say they find troubling. Please Turn to Page B2, Column 3

INSIDE

Media & Marketing Mixed With Machismo

Procter & Gamble is launching a line of skin care for men called Boss Skin—an extension of its Boss men's fragrance brand—and Grey Global has an unusual assignment: Make the ads look macho. B4

Health

Setting the Stage For New Lawsuits?

A conservative group, United Seniors Association, files a suit against major U.S. tobacco companies, seeking billions spent on smoking-related diseases by Medicare. B4

Classifieds B7

