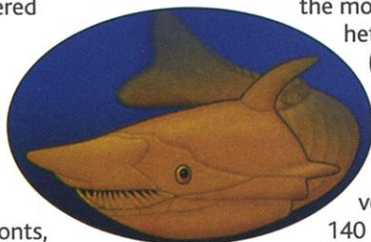


Jawbreaking Science

Even without jaws, lampreys and other living relatives of primitive vertebrates are hardly mild-mannered

vegetarians: Some attack prey with the fury of a wolverine.

Equally nasty were the eel-shaped conodonts, an extinct jawless fish. But a new study takes a bite out of a popular theory that



jaws evolved in response to increasingly aggressive hunting habits by jawless ancestors.

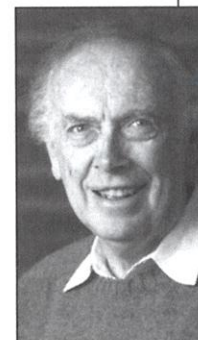
Using an electron microscope, Mark Purnell of the University of Leicester, United Kingdom, took a close look at the mouth parts of heterostracans (pictured), a group of extinct jawless fishes that were prevalent 140 million years until they went extinct at the end of the Devonian. Some researchers have argued that

the fish were predators. But in the 7 January issue of the *Proceedings of the Royal Society*, Purnell says that the tiny, triangle- and maple leaf-shaped denticles found in the mouths of many heterostracans are better suited for filter feeding. "If this animal tried to grab hold of prey, the denticles would get broken," he says.

Philippe Janvier of the National Natural History Museum in Paris says the study presents "the first good evidence of filter feeding in these early jawless fossil vertebrates."

Watson a Knight, But Not a 'Sir'

DNA maven James Watson has added another honor to his résumé. England's Queen Elizabeth has awarded the 73-year-old scientist the Insignia of a Knight Commander of the Civil Division of the Most Excellent Order of the British Empire. The New Year's Day knight-hood recognized the Nobel laureate's co-discovery—with Sir Francis Crick—of the double helix and his commitment "to the global nature of science."



Watson

The Queen's decree comes with a catch, however. As an American citizen, Watson won't be allowed to place "Sir" before his name. But the president of New York's Cold Spring Harbor Laboratory can now ornament his signature with the letters "KBE."

Watson was one of nearly 1000 people awarded various titles by the Queen. Other honored scientists included neuroscientist Francis Horn and theoretical physicist Peter Goddard, both of Cambridge University.

Chapel Hill. But the conclusion comes as no surprise to medical psychologist David Krantz of Uniformed Services University of the Health Sciences in Bethesda, Maryland. He cautions, however, that it remains to be shown that psychological stress, and not some other factor, is to blame.

Scared to Death by the Number Four

In Chinese and Japanese, "four" is pronounced just like "death." Now researchers have shown that Chinese- and Japanese-Americans suffering from chronic heart disease appear to be literally scared to death each month when the fourth rolls around.

Epidemiological studies

have already shown that stressful events can summon the Grim Reaper: Cardiac death rates blipped after the 1994 Northridge earthquake in California and the 1991 Persian Gulf War SCUD missile attacks on Tel Aviv. But skeptics say that such disasters also cause environmental

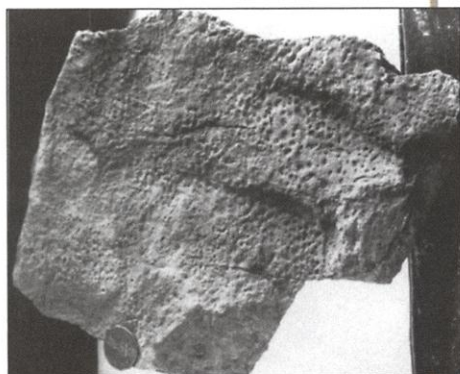
changes and medical service disruptions that contribute to mortality jumps.

Sociologist David Phillips and his colleagues at the University of San Diego realized that the fourth of the month presents a unique case in which a repeated harmless event might cause potentially harmful stress in those who are culturally conditioned to fear the day. To see if death rates increase on the fourth, the team analyzed computerized mortality figures for nearly 100,000 Chinese- and Japanese-Americans who died between 1989 and 1998, matching each Asian with 12 demographically similar white controls. They reported last month in the *British Medical Journal* that the Asians showed a significantly increased chance of dying on the fourth compared to the controls, with death rates for Asians up 7% on the unlucky day.

Some health experts are shocked by the results. "This sounds totally nuts; statistics has led someone very far astray," says anthropologist Judith Farquhar of the University of North Carolina,

A geologist has discovered what he says are the startlingly well-preserved imprints of raindrops that fell on Earth about a billion years ago. Chirananda De of the Kolkata-based Geological Survey of India found the "fossil rain imprints" on exposed sandstone in Madhya Pradesh in north-central India. He says the rock, which dates at 1 billion years old, could provide "insight into the atmospheric conditions of the primitive Earth." Geologists believe rain first fell at least 4 billion years ago, but De claims his "exceptionally well-preserved" drops—reported in the 25 October issue of *Current Science*—are among the oldest yet found.

Remains of Ancient Rain



Preserved pitter-patter.