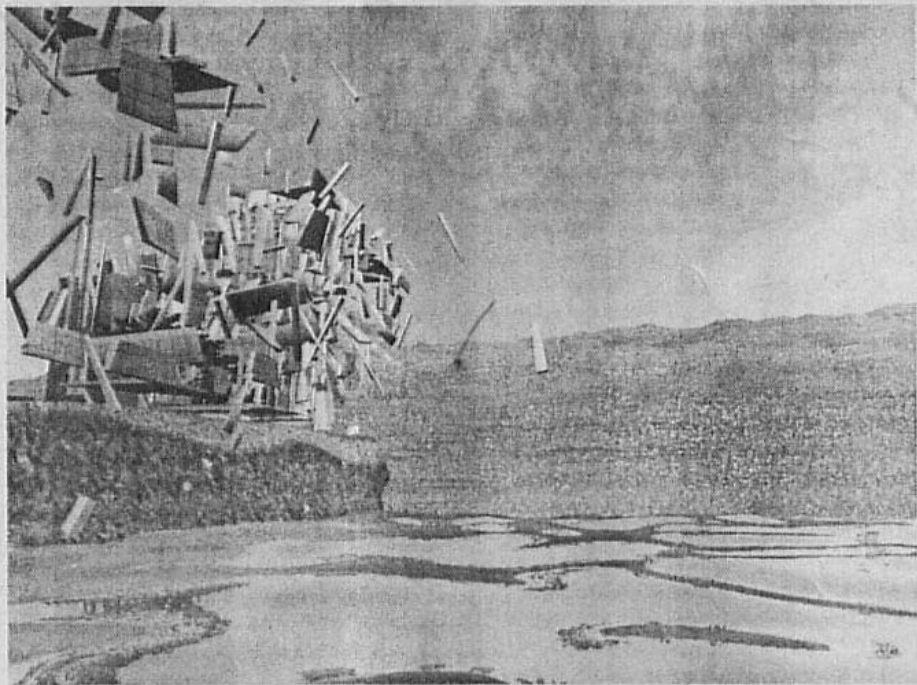


TSUNAMIS: Nature at its worst



DECEMBER 26th, 2004 will not be remembered by the people of the world as an ordinary annual 'Boxing Day' holiday. Instead, it will be remembered as the day when one of the worst and deadliest natural disasters in recent history, took place in the Indian Ocean. A massive earthquake took place near the Indonesian island of Sumatra, which triggered the launch of 'tsunamis'. These massive waves hit and devastated several countries of South and South-east Asia, as well as some African countries.

The Indonesian archipelago is situated at

the border of some of the 'Tectonic Plates', which is why frequent earthquakes, and rare volcanic eruptions, tend to occur here. Earthquakes cause tilting of ocean floors, causing a set of waves to be created. Tsunamis are usually made up of several oceanic waves that travel out from the slipped fault and arrive one after the other on shore. They can strike without warning, often in places very distant from the epicenter of the earthquake. Tsunami waves are sometimes inaccurately referred to as tidal waves, but tidal forces do not cause them. A tsunami can have wavelengths, or widths, of

100 to 200 km (60 to 120 mi), and may travel hundreds of kilometers across the deep ocean, reaching speeds of about 725 to 800 km/h (about 450 to 500 mph). Upon entering shallow coastal waters, the wave, suddenly grows rapidly. When the wave reaches the shore, it may be 15 m (50 ft) high or more. Tsunamis have tremendous energy because of the great volume of water affected. They are capable of obliterating coastal settlements.

The combined effect of the earthquake and the tsunamis were devastating. The disaster took place at some time after midnight GMT. The countries and regions were hit without warning.

In Indonesia, the earthquake's epicenter was close to the coastal city of Banda Aceh, in the Aceh province of Sumatra, Indonesia. This was the worst-hit region in the range of the disaster. Much of the city of Banda Aceh was levelled. The death toll in the country is currently feared to exceed 1,00,000.

The 'emerald island' of Sri Lanka suffered the most destruction, and was the worst-hit after Indonesia. The tsunamis destroyed a large coastal section of the island. The coastal city of Galle suffered the most devastation.

In Thailand, the tsunami caused large-scale devastation across several areas. The 'hot-spot' of the country's tourism, Phuket, was the most notable region of devastation. Large portions of the dead were the unsuspecting tourists who had gone to holiday in the warm, tropical beach resorts. Most of the beaches, resorts and residences in these areas were destroyed. Hundreds of divers, fishermen and seafarers were missing, undoubtedly lost and drowned at sea.

The eastern shores of India, and its distant Andaman and Nicobar Islands archipelago, had

suffered badly as well. Thousands were left dead, most of them fishermen, and thousands more were left injured, orphaned, homeless... Other countries, such as Bangladesh, Malaysia, Madagascar, Seychelles etc. suffered relatively less damage and fewer casualties. However, pictures and video footage, interviews and investigations, shown all over the world on Television and newspapers, revealed just how devastating, dangerous and shocking effects this disaster had left in its wake. The neighbouring countries of the affected area, as well as many of the rich, developed nations, are gradually sending financial and humanitarian aid to the worst-hit countries, in co-operation with the UN, UNICEF and other notable organizations. Across the world, many celebrities, including movie stars, singers, and sports stars are holding charity performances to raise funds to help the victims of this massive disaster.

The total death toll in the affected regions is now approximately 150,000. This disaster has left countless more injured, and caused property damage worth billions of dollars. The people in the affected regions require proper food, shelter, medicine and support. Many who have lost their loved ones, their homes, have been mentally affected by this tragedy. Moreover, the excessive dead bodies and poor environment can also lead to the spread of disease. Those who have suffered serious or near-fatal injuries need proper treatment in order to survive. Rebuilding, reconstructional development and social development will undoubtedly take a long time to accomplish and achieve. This is a plea to the able people of the world, "Please, show some humanity and help those in need."

By Tareq Adnan

Anti allergy cats and other weird tidbits

New cat designed for allergic pet lovers

A California firm is taking orders for genetically engineered cats for pet lovers who are allergic. The hypoallergenic felines are the first in a planned series of lifestyle pets, says Allerca of Los Angeles. Allerca hopes to attract customers among millions worldwide who suffer from cat allergies, CNN reports. The company expects the first kittens to be born in early 2007 and is already accepting \$250 deposits from interested customers.

The company says up to 10 percent of the U.S. population alone is believed to be prone to allergic symptoms that can affect the eyes, nose, ears, throat, lungs and skin. Many cat lovers ignore medical advice and discomfort and choose to keep the animals as pets, or use expensive medications to cope with their allergies. Using "gene silencing" technology, Allerca said it is able to suppress the production of the allergy-causing protein in cats.

Egyptians used tar in mummifications

Texas scientists have discovered that tar from natural oil seeps in the Middle East was used to mummify Egyptians millennia ago. Mahlon Kennicutt II, MoonKoo Kim and Yaorong Qian of Texas A&M University combed the Ras Zaafarana area near the Suez Canal and discovered tar was essential to the process of mummification. "The Egyptians apparently discovered that treating mummies with tar helped in the preservation process,"

Kennicutt explained. "The tar acts as a natural water sealer, meaning little or no moisture penetrates the wrappings, which could destroy the body. "Another interesting thing we learned was that some of this tar used by the Egyptians didn't come from nearby areas, but from hundreds of miles away from a different location on the Gulf of Suez." he research appears in the *Journal of Geoarchaeology*

Early T-rex may have had feathers

The mighty predator of the age of reptiles, the *Tyrannosaurus rex*, may once have had something close to feathers, a study says. Fossils of the earliest known ancestor of *T. rex*

have been discovered with clear impressions of downy feathers from head to tail, the *New York Times* said. In a report in *Nature*, the discovery team announced the 130 million-year-old fossils from northeastern China provided the first direct evidence

tyrannosaurs had protofeathers, the precursors of feathers now found on birds. It further supported the hypothesis that some dinosaurs grew a feathery covering to help keep warm. The primitive species, based on remains of two specimens, is a 5-foot-long dinosaur named *Dilong paradoxus*. Over the past eight years, paleontologists have excavated dozens of dinosaurs that bore traces of featherlike structures. Researchers said it probably would be an exaggeration to suggest the much larger *T. rex*, which lived toward the end of the age of dinosaurs, 65 million years ago, was covered in feathers but they could have had protofeathers until they reached maturity.

Nano-fibers for high-tech clothing

Michigan researchers are sewing tiny electronic devices made of carbon fibers into fabrics for specialized uses, the *Detroit Free Press* reported Monday.

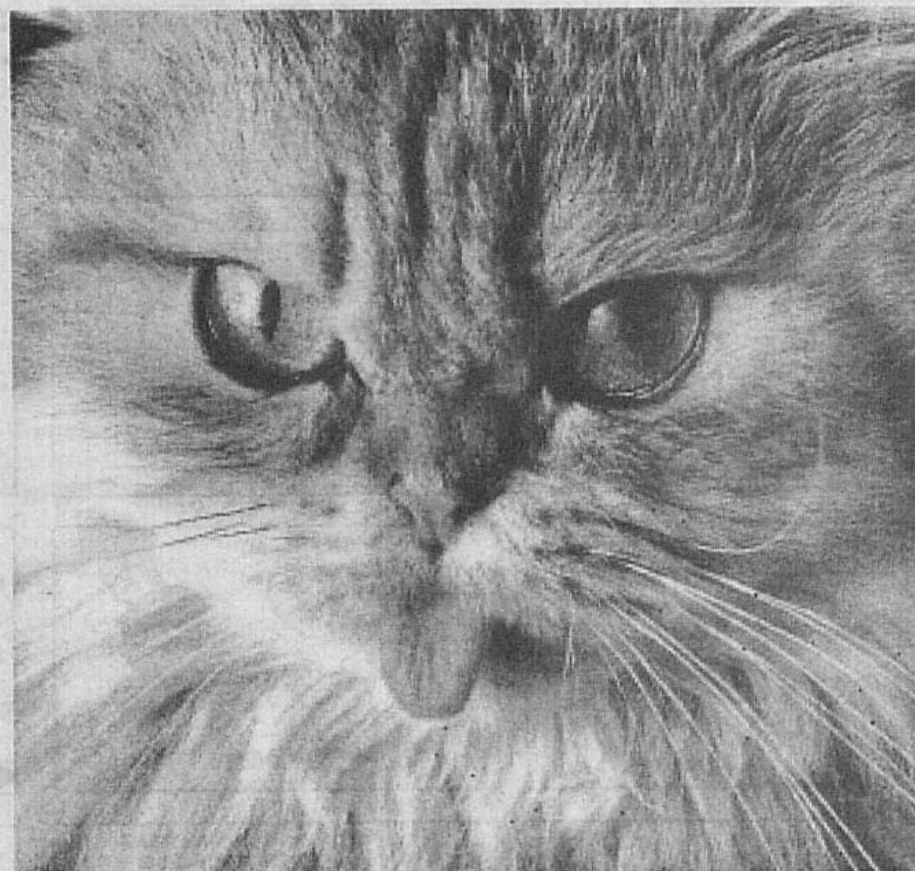
The Central Michigan University project is led by Professor. Maureen MacGillivray, who says carbon fibers about the width of four atoms create stronger, lighter and more flexible clothing materials and conduct heat and electricity better than any other known fabric. Other nanotechnology gear -- as that kind of apparel is called -- incorporate sensors and miniaturized global positioning system transmitters that can also be woven into textiles, presenting a wide range of applications. "This is already happening," she said. "In Japan, they've embedded a tiny global positioning chip in the backpacks kids wear to school. When they pass through the gates, the chip automatically records their attendance." MacGillivray said a U.S. company is already selling apparel products made from fabrics that have been altered at the molecular level to create so-called nano-whiskers. "If you've

ever seen the way water just runs off a peach, you can understand how these nano-whiskers can do the same thing to a pair of khaki pants," she said.

Report: North Pole was once sub-tropical

Fossilized algae from beneath the Arctic Ocean sea bed shows the area was sub-tropical

during its work, and was sailing heading back to Tromso in Norway, the BBC said. The samples date back to a period known as the Paleocene-Eocene thermal maximum, a brief period that occurred around 55 million years ago. It was characterized by an extremely warm climate that created a natural greenhouse effect, which



55 million years ago, the BBC reported Tuesday. Scientists from eight countries working with the Arctic Coring Expedition, or ACEX, said drilled core samples show the sea temperature was once about 68 degrees, instead of the average 29 degrees it is now. The expedition relied on three icebreakers

caused massive amounts of carbon to be deposited in both sea and air.

"We're seeing a mass extinction of sea-bottom-living organisms caused by these conditions," said Dr. Michael Kaminski, a paleontologist from University College London.

Compiled by Gokhra