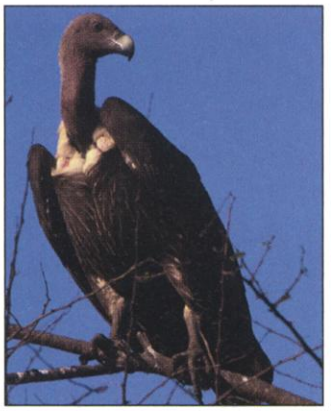
India's Vultures Declining

Rotting, stinking cattle carcasses seem to be strewn all over northern India—the result of a mysterious and catastrophic die-off of vultures. The situation has gotten so bad that the government is setting up carcass disposal plants. Meanwhile, about 50 experts will convene in Delhi this month for a 3-day workshop to line up funding and formulate a research plan.

India's vulture population crash actually began a decade ago. The results are now particularly evident in the north, around Delhi and in Uttar Pradesh and Rajasthan. One species in particular, the common white-backed *Gyps bengalensis*, has been virtually wiped out in some areas. A 1999 study by the Bombay Natural History Society (BNHS) found that the number of white-backed and long-billed vultures in Rajasthan's Keoladeo National Park, a world-famous bird sanctuary, had dropped by more than 95% in a decade. Nesting pairs dropped from 363 in 1987–88 to 20 in 1998–99, according to BNHS ornithologist Vibhu Prakash. In areas where vultures remain, many show signs of illness, such as prolonged periods of neck drooping. Such symptoms always seem to be fatal, according to Andrew A. Cunningham, a veterinary pathologist at the Zoological Society of London.



White-backed vulture in Uttar Pradesh.

Cunningham says this may be the biggest die-off ever to hit these hardy birds anywhere. As creatures that live by scavenging, they are normally highly resistant to disease, and group mortalities are usually the result of pesticide poisoning. But Cunningham, who recently spent several weeks in India investigating the vulture die-off, says that an infectious disease appears to be the culprit. "An epidemic has not yet been confirmed," he says, but it's beginning to look as though "a viral disease is involved." It may take a while to isolate the cause, however. Vultures are normally loaded with pathogens, says Cunningham, so scientists will have to examine a lot of fresh carcasses to home in on the guilty party.

Happy Landings for Flying Fossil

A fossil of a very early flying reptile, *Icarosaurus siefkeri*, has come home to roost permanently at New York City's American Museum of Natural History.

Scientists were in a swivet last month when they learned that Butterfields, a San Francisco–based auction house, was putting the 200-million-year-old fossil, a glider with the wingspan of a large dragonfly, up for sale. Now they are grateful to Bay Area businessman Dick Spight, who stepped in with $167,000 so he could donate the fossil to the museum. "It's come home," says paleontologist Kevin Padian of the University of California, Berkeley, who helped arrange the transaction.

Scientists have seized upon the sale of *Icarosaurus* as yet another example of the need for measures to keep unique specimens in the public domain. Berkeley paleontologist Mark Goodwin said putting *Icarosaurus* on the block was a "highly unethical event" that will only spur commercialization and fossil theft.

The fossil was discovered in a shale quarry near North Bergen, New Jersey, in 1960 by 16-year-old Alfred Siefker and two friends. Siefker loaned it to the museum, but reclaimed it in 1989. Needing money to pay medical bills, he reportedly tried to sell the fossil to several museums, but his asking price was too high. Finally, on 27 August it was purchased—at half the price Butterfields estimated it would bring.

The Power of Victorian Thinking

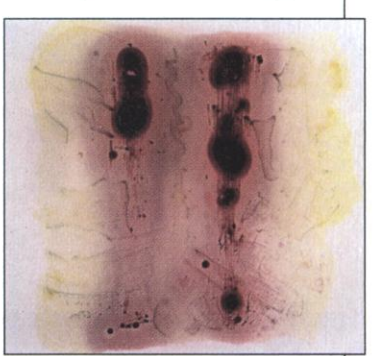
"It's plausible if not accurate to say that one ambitious Victorian thinker, Karl Marx, provided the most influential and salient theory of the 20th century. It may be plausible to anticipate that another Victorian, Charles Darwin, will be the equivalent figure in the 21st."

—Rutgers University anthropologist Lionel Tiger, in a 1 September speech to the Association for Politics and the Life Sciences meeting in Washington, D.C.

Fusing Art and Life

Biology has captured the imagination of the art world: Witness "Paradise Now: Picturing the Genetic Revolution," an exhibit opening this week at Exit Art, a gallery in New York City's Soho district, which examines "the meaning and urgent implications" of genetic breakthroughs.

The painting here, "Paraxial Mesoderm," was produced by David Kremers, the first-ever "distinguished conceptual artist in biology" at Caltech. Working with scientists, Kremers grows paintings of embryo cross-sections on 60-cm-square acrylic plates, using bacteria engineered to produce certain colors.



The show also includes a huge picture of sunbathers by British artists Heather Ackroyd and Dan Harvey, created by using grass as a photographic plate: Values are controlled by exposing growing grass to varying light. And there is a piece already renowned in the bio-art world: "Genesis," by Brazilian artist Eduardo Kac, who converts a passage from Genesis into DNA code, which is then used to alter bacteria whose growth can be watched on the Internet. Kac's latest project: genetically engineering a green bunny.

CREDITS: (TOP) PALLAVA BAGLA; (BOTTOM) DAVID KREMERS