On the winter solstice, in the Year of the Dragon, I struggled through the Hong Kong crowds, following my new colleague Paul as if he were a life raft just out of reach. Having moved from Virginia, with its naked trees and snow-stilled mountains, only three weeks earlier, I was overwhelmed by the color and flash of the Mong Kok market district. Paul, his shaved head and blue eyes bobbing just above the sea of dark-haired, earth-skinned Chinese, led me through the holiday tide. The unfamiliar Cantonese syllables circled me like flocks of gulls as we moved through the streets. Red-wrapped incense packets and skewers of baby octopi changed hands faster than I could count. Money flowed like water and I floated with it—through the fish market, bird market, flower market, and produce market.

This was my first trip into Hong Kong’s throbbing markets, and each shop housed a multitude of offerings. Vast cubes of glass were literally stuffed with living beings. Acrylic tanks, bags, baskets, and trays were full of gills pulsing, eyes darting, fins flailing. Some gasped on their sides, dying in their own element. An electric blue angelfish nipped another angel in a four-inch cube. Seahorses clustered like grapes around a solitary bit of coral in their tiny tank. Ten lionfish lay together in a shallow, floating colander. Plastic bags full of aquatic insects hung from shop doors.
I had heard about markets like these—and many much worse. I’d seen pictures of thousands of Asian turtles packed as tightly as cabbages in crates at Qingping Market in the mainland city of Guangzhou. I realized that it was quite possible that I would see an endangered species for sale here in Mong Kok. As we walked, I considered numbly what I would do. Shout incomprehensibly at the smiling shop owner? Buy the animal, thereby rescuing the captive while damning countless others in the wild? I soon discovered the answer.

Paul pointed them out to me in a shop that was stuffed as full as a sardine can. Beneath a cage containing a rabbit that was slowly dying of heat exhaustion, two golden coin turtles crowded together at the back of their box. The turtles, prized for the supposed cancer-fighting agents in their shells, were so young and anemic that I did not recognize them at first.

“How much?” Paul asked the shopkeeper in Cantonese.

“Seventy-eight hundred,” she replied. She was asking US$1,000 per turtle, $300 less than the typical black-market rate.

I stared at the endangered turtles for a long time. Here they were on sale, plain as day. “You want to buy?” the shop lady asked, smiling through her broken English. I desperately wanted to say yes. These turtles, native to Hong Kong’s mountain streams, belonged back in the high jungles of rolling mist. Barring that, I wanted to call the police. Paul, who had been in my position many times before, said that would be hopeless. The authorities were vastly understaffed, and before they could even find the shop, the keeper would have hidden the turtles away.

I was caught in the dilemma that many U.S.-based wildlife conservationists face abroad. Buying the turtles would increase demand and thus put more turtles on the market. If I didn’t buy them they would go straight to the apothecary’s stewpot, and the species would lose again by just that much. I had worked in environmental education for many years, but I couldn’t imagine convincing this woman to give up her jackpot. I doubted that words like sustainability or biodiversity would mean much to her.

At home, I had learned and believed that education and the law were safeguards against environmental travesty, that the phrase “endangered species” was armor for any creature behind its shield. I had come here to work in wildlife conservation, and here I hoped to teach my little lessons about saving the world. But this world was not mine, and in it my experiences, thoughts, and desires seemed to have no relevance.

We left the shop and I turned my eyes to the crowd. Women rifled through bins of skimpy shirts; children ran along the street carrying hunks of durian or candied apples. The rotten rawhide smell of barbecued tofu made me want to gag. I turned my head from a man twisting a screaming chicken’s neck, and saw three others holding two chow dogs in position, breeding them in the dark. At such close range, life and death become indistinguishable.

I arrived in Hong Kong in November 2000 as editor-in-chief of Kadoorie Farm and Botanic Garden’s English-language publications, including the internationally read newsletter Living Forests. The Farm, as it’s known by many in Hong Kong, is a nonprofit organization located at the foot of Kwun Yum Shan (Goddess of Mercy Mountain), in the heart of a mountainous peninsula called the New Territories. Originally part of an agricultural research and extension station founded by the brothers Lawrence and Horace Kadoorie in 1949, the Farm now serves as a center for environmental conservation, wildlife rehabilitation, and organic agriculture.

The commonly held image of Hong Kong is of a towering financial empire with more than 6.8 million people, but it is much more than that. Aside from the main island and its bustling Central District, there are another 235 islands and the New Territories, a sprawling peninsula attached to the Chinese mainland. Together, these precincts comprise a 425-square-mile area known officially as the Hong Kong Special Autonomous Region. Since the 1970s, roughly 40 percent of this land—102,571 acres—has been protected as wilderness and parkland.

After the encounter in Mong Kok, it seemed a strange coincidence that one of my first assignments at the Farm was to examine turtle ecology and the Asian turtle crisis. The golden coin turtles I had seen a few weeks earlier are emblematic of a vast decline in Asian turtle species. Thirty-seven of the ninety known Asian species of freshwater turtles are listed as critically endangered by the Convention on International Trade in Endangered Species (CITES). Yet most scientists acknowledge that the real number is closer to seventy-five species, due to the drastic increase in human consumption of turtles in China.

I started my task by asking Paul, the Farm’s conservation officer, to guide me through the Farm’s Wild Animal Rescue Center. As we made our way to the turtle enclosures, an endangered siamang gibbon, which a woman had tried to smuggle...
through the airport in her purse, ceased swinging through its cage to stare at us. A rare spotted linsang, confiscated in a wildlife trafficking bust, hid her long, elegant body in a PVC tube as we passed by. The last enclosures were for the turtles: Burmese star tortoises, Annam leaf turtles, Indochinese box turtles, more than I could count. The golden coin turtles, known locally as _gum chin gwei_ for all the gold they can bring, waited at the end of the row.

The five-thousand-year-old practice of Chinese medicine has always involved the eating of animals. Each plant and animal in the Chinese pharmacopoeia possesses qualities believed to be transferable to whoever ingests them. Turtles are symbols of strength and endurance, providing qi, or life energy, to the lungs, liver, and throat. Thus, singers and those with respiratory problems often seek them out. Golden coin turtles—known to the rest of the world as Chinese threestriped box turtles—also purportedly confer excellent cancer resistance. The healing properties are said to reside in the shell, which is boiled with a mixture of herbs for twenty hours to yield a thick black jelly.

More recently, the practice of eating wild animals has become a status symbol in China, especially in the economically thriving southern provinces. China’s newly rich now feast on everything from palm civet to shark fin soup, from cobra meat to braised sea cucumbers.

In their natural environments turtles play many vital roles, including that of nature’s garbage collectors. A study of a single Australian river indicated that its turtles consume as much as two hundred thousand tons of carrion annually. Without these scavenging services, Asian rivers like the Ganges, where soft-shell turtles consume human corpses, would be much more polluted than they are. Turtles may also provide clues to pollution problems because their shells accumulate toxic materials. Ironically, as the Chinese consume turtle-shell jelly to cure cancer, they could be ingesting concentrated levels of carcinogens. They play a shell game with their own lives when they eat the golden coin turtle.

Of all the endangered species in Asia, turtles are some of the most exploited because they are easy to capture and ship. A 2001 study by the U.S.-based Turtle Survival Alliance suggests that China has depleted nearly all of its native turtle populations and is now pulling them by the tens of thousands from Southeast Asia. The alliance’s survey of Guangzhou’s Qingping Market revealed that mostly non-native species were for sale. Likewise, in places where turtles had been abundant five years earlier, researchers could not find a single one.

Now, Indonesia, Myanmar, and Vietnam feel the scourge of China’s appetite, their habitats sucked dry of any turtle that will draw a profit. I had seen examples at the Farm of turtle traps, cleverly built of bamboo and used in Cambodia, Laos, and Vietnam. I had also seen pictures of so-called turtle dogs, canines trained to sniff them out from the jungle leaf litter. As I watched the turtles in their enclosures, it seemed they didn’t stand a chance against such an appetite.

With its large protected areas, Hong Kong’s country parks now provide some of China’s last wild habitat for riverine turtles such as the golden coin turtle and its cousin, the big-headed turtle. Still, poachers are active. Conservationists from the Farm recently discovered thirty-five trapping sites, with more than three hundred turtle traps, all in the New Territories. At one site, a flyer listed a cell-phone number for trappers to call when they were ready to sell.

The golden coin’s $1,300 price tag means that many people who live in Southeast Asia and southern China spend more time searching for turtles than working their farms, sometimes even slipping across the borders to poach turtles in Hong Kong. Laws forbid the buying, breeding, or killing of Hong Kong’s native turtles, but the potential reward is high and the risk is low. The Farm’s role here is multifaceted. Often, Farm workers patrol areas of known poaching activity to disable traps or release turtles. The Farm’s breeding program also ensures that golden coin turtles can reproduce safely. Chinese conservationists feel they are in a race against the poachers to keep these turtles alive.

A few months later, on a rainy summer night, I attended a farewell party for two co-workers. With cookies and roast duck I’d purchased near the train station, I arrived at my friend Trish’s, soaking wet and ready to bask in the warmth and glow of her home. Trish, who is a veterinarian at the Farm, lives in a house hidden among bamboo, rubber trees, and bright-blooming lantana. A stream runs behind the clump of neighborhood houses, coursing past boulders and through dense vegetation. While some of the group went exploring, I lounged around with Trish, learning naughty Cantonese words. She laughed at my mispronunciations, and my Cantonese colleagues smothered their smiles as I heaped horsebean pudding on my plate and butchered its Cantonese name, too.

The explorers eventually returned and settled themselves in a corner, peeling litchees and popping the white fruits into their mouths. One of the men whispered to Trish as she drew a cigarette out of a gold case.

“You know,” she said, “they found a gum chin gwei down there at the stream.” They had brought it back with them.

Trish told me that she had seen two golden coin turtles at the stream just a day before. They were chasing one another around
in the shallows, perhaps with mating on their minds. I was thinking of Mong Kok Market, and my unease must have shown. "At least now they'll be safe," Trish said. If we didn't take the turtles, she argued, then the poachers surely would.

One of the men took me outside to see the turtle. As he opened the covered pail I inhaled damp musk. The turtle filled the bottom of the five-gallon bucket—a giant by box-turtle standards—and its three stripes gleamed on its rain-shellacked shell. It was obviously in prime breeding condition, probably female. I stared down at it, realizing its incalculable worth to its species.

When I left for home I was angry. The turtle, I was quite sure, should have been left alone, free to follow its evolutionary destiny. Many years ago, as curator of live animals for the Science Museum of Western Virginia, I had fallen in love with a wood turtle named Ollie. He was a crotchety old chelonian who chased me and nipped my shoes whenever I let him out for exercise. His species was threatened in Virginia, and when I first came on as curator, he had been very sick and weak. It was only after tempting him with live food that I slowly nursed him back to health. I disliked Ollie's captivity, but it comforted me to know that he would live out his life in luxury, educating and delighting hundreds of people.

But this removing of the golden coin turtle from the stream, for some reason, felt different. How ironic, I thought, that my colleagues took the same actions they denounced in poachers. I was ambivalent about whether their actions would help solve the problem of the turtle's slide toward extinction. My experiences with turtles at the museum had taught me that people are quick to begin rehabilitation programs because these tangible undertakings make them feel like they are doing something meaningful. But these management strategies often fail to address the complexities of turtle biology. For example, it's very easy to destroy a turtle community by removing even a few reproductively active adults. Since it takes turtles so long to become sexually mature, a population often relies on just a few breeding adults to carry it for several years. Remove them and the population crashes. This is what happened after a restricted-access area in New England was opened to recreational use and visitors removed just a few wood turtles.

Other issues arise with captivity. Turtles are notoriously delicate. At the museum, I learned all too well of the slow and often undetectable way in which turtles can waste away. Their armor can be their weakness; their slow-growing shells mask many illnesses, like shell rot, until they have advanced to a critical stage. Furthermore, turtles in captivity often contract pathogens that are dangerous to wild populations. Researchers believe that captive-bred turtles are responsible for introducing upper respiratory tract disease (URTD) to wild tortoise populations in Africa, Florida, and the Mojave Desert. Parts of the Mojave have seen their tortoise populations plummet by 76 percent since the introduction of URTD.

Evidence also suggests that reintroductions may be a waste of time. Turtles have always been considered solitary animals, coming together only to breed or use common resources, as in the case of communal basking on river rocks. More recent studies suggest that turtles live in territorial groups, and a resident population will often drive off interlopers. This behavior has been observed among golden coin turtles. To relocate so-called foreign turtles in an established wild population may do little more than consign them to death. Despite the good intentions, I was not so sure that the fate of the largest wild population of three-banded box terrapins in Asia should rest so squarely on the staff at the Farm.

The next day at work I asked what had happened to the "rescued" turtle, and my voice clearly carried my anxiety. I was assured that she would be returned to the wild, that she had been taken only until the rains were over so she wouldn't wash downstream into unsafe places. This struck me as an orchestrated bid to placate my fears, and I again felt just how different this place was from home.

In Hong Kong, wilderness and wild things are so rare that in order to protect them, people are forced to steal them. Letting an endangered turtle go about its business is an unaffordable luxury.

My anger turned to helplessness and then to near-despair a few weeks later when I visited the Farm's rescue center on a Saturday afternoon. Hong Kong police had confiscated a huge illegal shipment of turtles at the airport and brought them to the Farm. Thousands of turtles had been found jammed inside bamboo baskets labeled seafood—crabs. There were different species from all over Asia, especially softshell turtles, many dying from injuries, malnourishment, and crowding.

I saw Trish holding a mortally wounded softshell turtle in one hand and a syringe in the other. She injected the liquid death slowly, saying nothing. She put down the softshell and picked up another turtle whose body had been pierced completely through. "Often when they find them," she said, "they'll just stab them with a stick and drop them in their baskets. Saves having to bend down and pick them up. Like garbage."

The suffering made the air close and nauseating. I wanted to believe that only the need to survive could force people to act so cruelly. But when turtle hunting becomes an opportunity for wealth, not sustenance, how could I believe that people only did it to feed their families?

Trish went to check a microscope slide for parasites, and I decided to let her get on with her work. As I left, my shadow star-
tied the softshell that I thought was already dead. He raised his head and flippers. He seemed surprised, as though he had been dozing on the river bottom only a moment before someone had plunked him down on this tray, as though he was calculating how he might return to the mud. I watched as the effort became too great, and the turtle’s head stretched into a wrinkled, useless trunk. Something small went out of the world then, so painfully small it was like the prick of a needle. Or the first tremors of an earthquake.

I went outside where the afternoon light touched the Farm’s golden coin turtle enclosure. The turtle from Trish’s backyard stream stretched out her golden head toward a nearby insect. As she snapped it up, she glanced at me, a slow side-glance upward. In that gesture, I read the poem of two hundred millennia drawn out and inscribed on the hard shell. The look she gave me was filled with a minute, sure intelligence, a set of accumulated data that has been tanking around the planet for longer than we naked, soft-skinned humans have even existed.

I had read earlier that day about the Chinese myth of Kwei, the dragon-headed turtle. When the Earth was destroyed, Kwei had sacrificed his body so that the Earth might be reborn. In doing so, he passed on his life to guardian turtles that guide human beings to truth and wisdom.

I longed for this turtle to impart similar wisdom, for I was deeply confused. As with many things Western, American models of conservation are little more than wishful thoughts when applied internationally. This rare turtle was alive because my colleagues removed it from the wild. The softshell was dead because the poachers had found it first.

Chinese conservationists believe they cannot wait for laws or large-scale habitat management schemes. They are at the point where, like Kwei, they must do whatever they can to save their environment. Perhaps if they manage to rescue some precious pieces, the greater puzzle can be reassembled someday.

This reality was made even more poignant in December of 2001 when Hong Kong wildlife officials made the largest turtle-trafficking bust in history. More than ten thousand turtles in various stages of decline were confiscated on Hong Kong’s docks. Many of the twelve species discovered were highly endangered, including the rare river terrapin, Batagur baska. Kadoorie Farm took these turtles in by the truckload. More than two thousand of them died, but with the help of several airlines and the Turtle Survival Alliance, roughly forty-two hundred of the healthy turtles were shipped within six weeks to breeding facilities around the world.

By that time I had returned to Virginia to be at my father’s bedside as he died of the very disease golden coin turtles were reputed to prevent. Colleagues flooded my e-mail in-box with descriptions of dump truck-loads of injured turtles and the exhaustive effort to save as many as possible. I tried to help the Farm in my small way by acting as its Stateside representative, fielding questions from The Washington Post and other newspapers while my co-workers handled the turtles.

And despite many of my doubts about rehabilitation and reintroduction, three years later there is hope. Since the Hong Kong seizure, CITES has taken a stronger stance on the issue by adopting twelve proposals covering twenty-two species of Asian turtles, and in October of 2004 it designated five more Asian species in need of international protection. The Turtle Survival Alliance placed the turtles it received in breeding colonies and some have reproduced, giving their species some small assurance against extinction. These captive colonies preserve options for some species, yet little is known about how to release turtles back into the wild properly. The real solution to the Asian turtle crisis will not be found in voluntary international agreements aimed at nabbing wildlife traffickers or in breeding programs. Ultimately, a real solution must grow out of a yet more difficult work—habitat conservation and public education.

Soon after the turtle-trafficking story broke, I walked through my father’s abandoned garden. He had had the strength to plant it, but by now he could do little but hunker under a blanket on his couch. The tomatoes he had carefully planted were a tangle of drooping vines and rotting fruits. I heard the swift warning hiss before I saw it—a box turtle that had been munching on a low-hanging tomato until my closer inspections forced him to retreat within his shell. I examined him carefully, amused at how he poked his head out from his shell as I held him, then retreated swiftly when he saw me peering at him.

Many Americans have trouble understanding traditional Chinese medicine, but if I had believed a turtle could save my father from cancer, I would certainly have brought one to him. And if I believed, as Chinese conservationists do, that removing a turtle from the wild would ultimately save its life, I now know that I would probably do that, too. What is needed, I have learned, is our help, not our criticism. After all, it was not so long ago that we nearly ate our own diamondback terrapin to extinction, simply because we liked the taste. 

I had returned to Virginia to be at my father’s bedside as he died in his home of the very disease golden coin turtles were reputed to prevent.