

## Darwinism in Modern China

GENE KRITSKY

Department of Biology  
College of Mount St. Joseph  
Mount St. Joseph, Ohio 45051

China has a rich philosophical and political history that has been affected by Darwinian evolutionary theory very differently compared to western societies. The Chinese view of creation was never associated with the direct actions of a supernatural being but with the interaction of impersonal forces. The oldest creation story in China was written by Lieh-Tzu who is thought to have lived between 450-375 B.C.E. His creation story is a series of steps in a progression in which the earth and heaven arose from chaos. A century later, Chuang-Tzu elaborated on the progression of life:

Certain seeds, falling on the water, become duckweed. When they reach the junction of the land and water, they become lichen. Spreading up the bank, they become the dog-tooth violet. . . grafted to an old bamboo which has for a long time put forth no shoots, produces the ch 'ing-ning which produces the leopard, which produces the horse, which produces man (Veith 1960).

This progressive view of the origin of the universe and of life gives China a very different base from which to receive Darwinian evolutionary theory.

Darwin's views first entered China indirectly via the translated writings of his close friend, Thomas H. Huxley. Yen Fu, a Chinese educator working in England in the late nineteenth century, translated Huxley's *Evolution and Ethics* published in 1896 and published the Chinese version in 1899. His translation had a great impact on Chinese education because he interjected Chinese quotations in place of some of the Western quotations in Huxley's book. This made the translation relevant to Chinese society and allowed Darwin's concepts of natural selection and a struggle for existence to enter China before the translated version of Darwin's *Origin of Species* was published in 1903 (Veith 1960, Freeman, 1977).

Iza Veith (1960) examined evolution in China as part of the centennial celebration of the publication of the *Origin of Species*. Her study, however, stopped with China before World War II. Since then, China has witnessed turbulent political developments. In 1949, Mao Zedung proclaimed China the Peoples Republic of China and started the country on a Soviet style redevelopment. In 1958, the problems of applying the Soviet approach to China became apparent and Mao initiated the Great Leap Forward. The Cultural Revolution, started in 1966, was an effort to restructure society by tearing down the bureaucracies that had evolved in education, industry, and agriculture. The Cultural Revolution turned the country upside down, closing universities, upsetting industrial development, and disrupting management of the economy. With the death of Mao in 1976, the Cultural Revolution ended and China entered a period of relative stability. The rise of Deng Xiaoping, his rapid program of industrialization and limited experiments with capitalistic motivations led to a reinterpretation of Mao as a great man, credited with bringing the country to communism, but also having made serious mistakes in the last twenty years of his life. This thumbnail sketch of China's history sets the scene for how Darwin and evolution are playing a part in China in the 1980s.

I had the opportunity to visit the Peoples Republic of China in May and June of 1986 as part of a scientific exchange. My visit enabled me to interview scientists, educators,

government officials, and students as well as to visit universities, museums, and zoos. I was able to see firsthand how Darwinian evolutionary thought is faring in modern China.

Evolution and darwinism are taught in the compulsory educational system in both nature and history classes. Students I spoke with responded to my questions about Darwin by stating that he was a great man who was important to China because of his role in the development of Marxism. Another student responded with "survival of the fittest" when I mentioned Darwin's name. This linkage of Darwin to Marxism is touted in the Natural History Museum in Beijing, where the exhibit on Darwin and evolution is followed by a display on Marx and Engels. The entrance to the Hall of Man and Human Evolution is flanked by a large oil painting of Mao Zedung and Zhou Enlai greeting the peoples of the world. An interesting cultural aspect was the use of the famous Time-Life evolution of man pictorial which ended with a Chinese rather than a Caucasian.

The exhibit on the history of evolutionary thought in China also included the importance of Thomas Huxley to the introduction of evolutionary theory to China. The exhibit included small photographs of Lamarck, Darwin, and Huxley followed by a larger photograph of Huxley lecturing to a group. The panel also included a painting of Jo Shu Lin, said to be an important Chinese writer on evolution.

The introduction of evolution to school age children was quite obvious even to an outsider. While I was at the Natural History Museum in Beijing, I watched museum guides tour several elementary school groups through the facility. They stopped in the dinosaur hall and like children everywhere they were fascinated with the extinct giants, calling out the names of the various dinosaurs that were pointed out to them. They also stopped in front of the displays pointing out the benefits of evolution as a modern idea of science. The children also toured the human evolution hall and the zoology hall. Indeed, every natural history museum I visited in five Chinese cities had several evolutionary trees to reinforce evolutionary ideas. Even in unusual places you could still find reminders of evolution. Just outside the panda enclosures at the Beijing Zoo, was a series of panels relating humans to the rest of the animal world and the relationship of humans to the evolution of the primates. The primate hall was a distance away from this evolution display which perhaps was placed in that location because of the popularity of pandas making it a widely visited site.

An unexpected use of evolution was to set up a dichotomy between science and religion. One government guide said he would never have Americans tour the Natural History Museum in Shanghai because it would offend us. His reasoning was the museum was organized around evolution and Americans believe in creation. He also claimed that there was freedom of religion in China but that most people were atheists in part due to the discoveries of science.

Evolutionary thought apparently has a role in the new push towards industrialization. The newly renovated dinosaur hall in Beijing has its labels in both Chinese and English, evidently to reinforce the importance of studying English. The lead panel reads:

Although, at the dawn of human history, people tried to understand living things around them, it is only with the development of modern science and technology that human beings can progressively probe into [the] mystery of ancient and modern organisms. What you will see is only a spot of living things of ancient antiquity, about millions of years ago. However, the invertebrate of all forms, the dinosaurs of varied shapes, the mammals of wide adaptation etc., have extensively supplied us with scientific information concerning morphology, ecology, behavior and evolution of organisms, which can serve the new revolution of science and technology.

### **Acknowledgments**

This project was possible with the support of an Indiana Academy of Science Research Grant and a Summer Research Grant from the College of Mount St. Joseph.

### **Literature Cited**

- Freeman, R.B. 1977. *The Works of Charles Darwin*. Archon Books, The Shoe String Press, Hamden, CT.
- Veith, Ilza. 1960. Creation and Evolution in the Far East. In: *Evolution after Darwin*, vol. III, *Issues in Evolution*. University of Chicago Press, Chicago. pp. 1-17.

