The Giant Pandas of Wolong.


Since its discovery in 1869, the giant panda has remained an enigma to scientists. With striking black-and-white coloration, dextrous thumb-like sesamoid, peculiar herbivorous diet (uncommon for a member of the order Carnivora), behavioral habits restrictively bound by the unpredictable flowering cycles of bamboo, and obscure evolutionary history and taxonomic status, the giant panda has been the source of many biologists' lifetime ambitions. For example, Dwight D. Davis in 1964 used the giant panda for his classic treatise on evolutionary comparative morphology and, more recently, Stephen Jay Gould and Steven Stanley have formulated revisionary models for evolutionary change using the panda as a test case. All of these discussions, however, have developed despite any real information on how the giant panda lives in nature. Because of improving Chinese-American relations, George Schaller was invited in 1980 to head the first scientific expedition to study the giant panda in its natural habitat of southern China. Because of the giant pandas' dwindling population size, the ongoing project's primary aim is to study aspects of the panda's life history that are critical to establishing effective conservation measures.

This volume, the first of two, describes the giant panda's role in the history of Chinese civilization; past and present geographical distribution; Wolong nature preserve, the primary study site; feeding behavior, food selection, water intake, nutrition, and effects on bamboo; home range and daily movement patterns; activity cycles; population dynamics and social behavior; behavioral (nutritional) constraints imposed by a strictly herbivorous diet; and, conservation guidelines.

Primary emphasis is given to the fragile nutritional condition of the giant panda, in which 99 per cent of its food consists of bamboo stems, branches and leaves. With essentially a carnivore digestive system, the giant panda quickly and inefficiently processes such foliage and, because of its large size, is forced to consume approximately 12.5 kg (fresh weight) of bamboo per day. Detailed measurements of organic and inorganic constituents of bamboo and digesta characteristics are described along with rigorous analyses of daily activity patterns, which together provide a basis for calculating the energetic needs of the giant panda.

Schaller's previous field studies, most notably of the mountain gorilla, tiger, African lion, and Himalayan ungulates, are crowning examples of how to do good ethology and animal ecology. The Giant Pandas of Wolong is a significant departure from his previous books as it emphasizes physiology and nutrition, undoubtedly because these areas present immediate problems for the giant panda's future. Behavioral information is frequently presented in general form, based on descriptions of only six animals, and some behaviors, especially reproductive patterns, are mainly described from observations on captive animals. Clearly, Schaller and his Chinese colleagues faced tremendous physical difficulties in tracking a large, skittish, and potentially dangerous animal at high altitudes through thick bamboo forest. Nevertheless, I would have been more comfortable if some of the singularly adaptive explanations were presented with alternative explanations or, at the very least, were placed within shortcomings of the data at hand. For example, in explaining the unusual coloration of the giant panda, the authors assert, "Striking colors send complex signals to other members of a species, and it is in this context that the adaptive value of the pelage must lie" (p. 163). With virtually no behavioral information supporting this hypothesis, other explanations concerning phylogeny, crypticity, or thermoregulation should have been elaborated. In general, though, this may be asking too much of the first and only expedition to have truly "seen" the giant panda. This book is certainly satisfying.
in providing a broad summary of what the panda is actually doing in nature and, perhaps more importantly, will allow future generations of biologists to test their pet theories against the solid information resulting from this study.

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This well-organized book brings together much of what is known about gray whales in 25 chapters written by a total of 38 investigators. It is divided into four broad categories: evolution, fossils, and subfossil remains (2 chapters); historical relationships and exploitation (6 chapters); demography, distribution, and migration (9 chapters); and biology and behavior (8 chapters).

The final section gives excellent up-to-date information on the gray whale fossil record and on the now-extinct Atlantic gray whale. The section on exploitation explores early Japanese whaling, whaling by aboriginal cultures of the north Pacific, early Yankee whaling, and the activities of modern commercial pelagic whaling vessels. The third section describes the seasonal abundance of gray whales in the Bering Sea, the lagoons of Baja California, and at several points of the migration route in between. The final section describes some aspects of feeding ecology, selected biological notes gleaned from recent Russian whaling activities, acoustic behavior of gray whales in a calving lagoon and in the arctic, and dive and movement pattern information obtained from the most successful radio-tracking of whales accomplished to date.

Although quite a few researchers have looked especially at occurrence and migration patterns of gray whales in the past dozen years, very little detailed work has actually been done on descriptive behavior of the species, and virtually nothing is known about social organization. Because of the dearth of such information, discussions of social ecology and interindividual interactions of gray whales are almost totally lacking in this book. Gray whales occur close to shore in nearly all parts of their range, and dedicated field biologists could study details of behavior during long field stays. Humpback whales and right whales recently received such detailed attention, and I hope that in the near future, studies of gray whales will progress in similar fashion.

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The 90 papers presented here are grouped into four categories: (1) biochemistry of cytochrome p-450 and organic compound biotransformations, (2) biochemistry and biological significance of metal-binding proteins, (3) biochemistry, physiology and bioassay, and (4) immunology and pathology. The papers range in length from two-page extended abstracts to full manuscripts. With very few exceptions, the work reported in this volume reflects the sophistication gained in pollution research since the Stockholm Conference on the World Environment in 1972. In fact, most of this volume could not have been written five years ago.

The majority of the papers dealing with specific pollutants are on the toxic metals (copper, cadmium, lead, and mercury) and the polycyclic aromatic hydrocarbons; only a few papers deal with the chlorinated hydrocarbons. More than half the papers are on some aspect of the biochemistry of cytochrome p-450. In fact, both the symposium and this volume serve as a focal point for clarifying the nomenclature and method of reporting the apparent nature of an isolated form of p-450.

I recommend this volume to workers in the field of pollution research despite the high price. The papers are well written and are profusely referenced and reflect some of the best work done to date on organism responses to common environmental pollutants.

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Osmoregulation in Estuarine and Marine Animals. Proceedings of the invited lectures to a Symposium organized within the 5th Conference of the European Society for Comparative Physiology and Biochemistry, Taormina, Sicily, Italy, September 5–8, 1983. Lecture Notes on Coastal and Estuarine Studies, Volume 9. Edited by A. Pequeux, R. Gilles and L. Bolis; Series Editors: Richard T. Barber et al. Springer-Verlag, Ber-
George B. Schaller. When, in 1978, Hu Jinchu and his colleagues erected a hut and several tents in the forests of the Qionglai Mountains in Wolong Natural Reserve to study giant pandas, it was the beginning of an intensive effort to save a species that was much adored but little known. I was privileged to become a member of the Chinese research team on behalf of World Wildlife Fund. Wenshi Pan, Yu Long, Dajun Wang, Hao Wang, Zhi LÄ¼ and Xiaojian Zhu. They discovered that giant pandas at the Wolong Nature Reserve occupy small (3.9–6.4 km²), relatively stable home ranges. The giant panda is a solitary mammal (Schaller et al. 1985). It is quite difficult to locate individuals in remote mountain areas covered with dense vegetation. The Giant Pandas of Wolong: ISBN 9780226736433 (978-0-226-73643-3) Hardcover, University of Chicago Press, 1985. Founded in 1997, BookFinder.com has become a leading book price comparison site: Find and compare hundreds of millions of new books, used books, rare books and out of print books from over 100,000 booksellers and 60+ websites worldwide. Coauthors & Alternates. Zhu Jing. George B. Schaller, Hu Jinchu, Pan Wenshi, Zhu Jing. 3.25 · Rating details. Â· 4 ratings Â· 0 reviews. George Beals Schaller (born 1933) is an American mammalogist, biologist, conservationist and author. Schaller is recognized by many as the world's preeminent field biologist, studying wildlife throughout Africa, Asia and South America. Born in Berlin, Schaller grew up in Germany, but moved to Missouri as a teen. He is vice president of Panthera Corporation and serves as chairman of their Cat Advisory. Schaller is recognized by many as the world's preeminent field biologist, studying wildlife through by George B Schaller, Wildlife Conservation Society. Our steps are muted on the forest trail, and the bamboo beneath a canopy of hemlock, pine, and birch crowds us. Naturalist Hu Jinchu suddenly points out two fresh panda droppings. Is a panda nearby? There WWF began its collaboration with Hu Jinchu, Pan Wenshi, myself, and others to unravel the intricacies of the panda's inscrutable life, a task that occupied us for the next few years. Natural history remains the cornerstone of knowledge about species and their role in the ecosystem. It provides the information upon which realistic, innovative, long-term conservation plans depend. Panda Clones In 1997, an effort to clone the giant panda was initiated by scientists from the Chinese Academy of Sciences. Schaller also found evidence that pandas were originally carnivores, but underwent an evolutionary change to accommodate a diet of bamboo, which is difficult to digest, reducing competition with other animals for food. Since Schaller's research, the panda population has increased in the wild by 45 percent. During his time in China, Schaller would hand out cards to wildlife hunters that.