

ENDANGERED SPECIES

Technical Bulletin Reprint

Wildland Management Center
School of Natural Resources
The University of Michigan

Can the Kouprey be Saved?

by Nancy Nash

Last year the International Union for the Conservation of Nature and Natural Resources (IUCN) published a list of the ten animals in the world it considers most in danger of extinction. Among them was a species of Asian wild cattle known as the kouprey. It was depicted in cave paintings thousands of years ago, but only "discovered" and classified by scientists this century. If the kouprey is not already extinct, at best only a handful survive.

The kouprey's natural habitat encompasses Thailand, Laos, Cambodia and Vietnam. Today few people in these countries would claim to be familiar with it. But this was not always so. To early southeast Asian people kouprey were an important part of their lives and almost certainly considered to have magic powers.

Statues have been found throughout the Khmer empire featuring kouprey kneeling, and the animal, carved in bas-relief, decorates the walls of Angkor Wat temples. They figure in pre-historic cave paintings dating back 10,000 years and have been discovered ceremoniously buried in ancient Ban Chiang culture graves in northeast Thailand.

But the kouprey was only "discovered" by the modern world in 1937 when one arrived with a job lot of other captured animals at the Vincennes zoo in Paris. French zoologist Prof. A. Urbain studied this strange *boeuf gris du Cambodge* and realised it was an unknown species. He named it *bos bibos Sauveli*, after his Saigon-based colleague Sauvel, who had captured it.

By 1940, Dr. Harold J. Coolidge, a founder of both the IUCN and the World Wildlife Fund (WWF), had made

further studies of the kouprey and classified it as a new genus. He changed its Latin name to *Novibos Sauveli*. The kouprey will almost certainly remain the last major mammal to be discovered on earth and recorded in science textbooks. Experts agree it is extremely unlikely any new terrestrial creature anywhere near its size will be found.

Because of the kouprey's special characteristics and importance to the ancient Khmer people, Prince Norodom Sihanouk declared it Cambodia's national animal in 1964. Fifteen years later he was forced to flee his war-torn homeland, and the kouprey, for those who studied it, appeared doomed. Nobody knew exactly how many remained, but estimates ranged from 80 to 100.

The kouprey had been decimated by human folly. It was hunted long after it was known to be endangered, its habitat was destroyed by poorly planned agriculture and industry alike, and it fell victim to armed conflicts that have raged through the region, having no defences against automatic weapons.

"If the species is extinct, it was brought to the edge by careless over exploitation and pushed over the edge as a result of continued armed conflict," says American ecologist Dr. Lee M. Talbot, who along with Thailand's wildlife crusader Dr. Boonsong Lekagul and French ecologist Prof. Pierre Pfeffer, have been spearheading the campaign to save the kouprey.

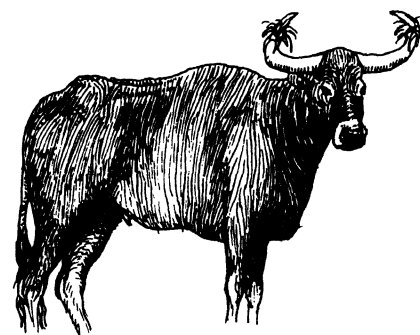
It was while in exile in Peking that Sihanouk disclosed some information that excited the conservationists. He revealed that during the two years prior

to his enforced departure from Phnom Penh, he had kept a pet kouprey which enjoyed eating the palace roses. To the handful of people who had ever attempted kouprey capture missions, this appeared a positive indication that kouprey could thrive in captivity.

There is also biological evidence suggesting that kouprey must be resistant to rinderpest, the major disease that kills domestic cattle. Although they are among the most primitive cattle, with features similar to the wild oxen of Pleistocene times, if they have the same chromosomes as domestic breeds — and experts think they do — crossed with domestic relatives a disease resistant breed could be developed.

"But strong and intelligent as the kouprey is, it is not resistant to bullets," says Pfeffer, who was in Cambodia on a kouprey rescue mission when war broke out in 1972, "and it is not resistant to destruction of habitat.

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Kouprey

A Fresh Look at Global Interdependence

by Steve Shipe

When James Lovelock published *Gaia, a New Look at Life on Earth*, in 1979, he introduced a revolutionary view of our home. This view was contained in the so-called Gaia Hypothesis. The hypothesis "postulates that the physical and chemical condition of the surface of the Earth, of the atmosphere, and of the oceans has been and is actively made fit and comfortable in the presence of life itself. This is in contrast to the conventional wisdom which held that life adapted to the planetary conditions as it and they evolved their separate ways."

In effect, the Gaia hypothesis asserts that ours is truly a living planet, that every organism is linked to and dependent upon every other organism no matter how tenuous or incomprehensible that link may be.

The *Gaia Atlas of Planet Management* is the most recent and illustrative reaffirmation of this hypothesis. There is nothing revolutionary or even new within the pages of the Atlas. Its message is the same one that has been proclaimed time and again by modern day prophets: humans are altering the environment at an unprecedented rate and the causes are as much political, social and economic as they are physical. All of the information contained in the Atlas is readily available in many other forms, such as *The World Conservation Strategy*, the *Global 2000 Report to the President* and *The State of the World, 1984*. Rather, it is the method of organization and presentation which makes this work unique.

management" and add their hopes that it will "spur the rising global debate on our future prospects."

An example might prove useful here; let's take the section on Evolution. This section is introduced by the eminent biologist, Paul Ehrlich. Some of his recommendations in this section include: maintaining genetic diversity within a species (through the preservation of distinct populations) is just as important as saving total numbers of species; developed countries should forbid the disturbance of any more land and, instead, concentrate on making the land already occupied by humans more hospitable; the richer nations should help the developing nations find ways to provide for themselves, for only through helping them meet their needs will global conservation goals be met which aid the long term survival of mankind.

Some rather astonishing information follows in the ensuing parts of the Evolution section. For instance, in the Potential resources portion, one discovers that we rely on 30 plants to supply 95 percent of our nutritional requirements and that just 8 plants supply 75 percent — yet there are over 80,000 edible plants available for human consumption. The Crisis section then addresses the problem of genetic erosion and presents some sobering information: The U.S. soybean crop is derived from the genes of six plants! Almost 75 percent of the potatoes grown in the U.S. are from four varieties. Our dependence on such genetically stagnant crops could prove disastrous if a resistant organism or disease appears. Finally, the Management alternatives part suggests that "land races," primitive plant cultivars and animal breeds, be preserved; these are races that are still used by traditional farmers, but can be easily lost through the introduction of "super" seeds and habitat destruction.

There are hundreds of examples of this type throughout the book. Many are illustrated for emphasis. Perhaps the most poignant use of facts and illustrations occurs in the sub-section of

. . . The Gaia hypothesis asserts that ours is truly a living planet, that every organism is linked to and dependent upon every other organism. . .

The Gaia Atlas is a more effective source than these others because its primary audience is the general public. The information it provides is a comprehensive, yet well-distilled examination of the planet's ecological problems. The bulk of the book is filled with beautiful photographs, instructive, multi-colored graphs and charts, and short presentations of facts and statistics, all wonderful aids in grasping the magnitude of the human-environment dilemma.

The structure of the Atlas is another important feature which lends power to its message. There are seven major sections: Land, Ocean, Elements, Evolution, Humankind, Civilization and Management. Each of these sections is examined from three perspectives: Potential resources, Crises and Management alternatives. The authors of the Atlas feel that this structure "offers one possible approach to planet

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Kouprey continued

"To establish this dreamed-of new and strong hybrid we must first save the kouprey and establish a captive herd. And this has never been accomplished."

Pfeffer's abandoned rescue effort was the last until 1982, when for the first time in 30 years there were reliable sightings in Thailand. A Royal Thai Forestry Department team, which included the indefatigable Dr. Boonsong, headed for the Dongrek Range, that forms a natural barrier with Cambodia, where the kouprey had been sighted.

"The animals sighted actually formed a small herd comprising a bull, two females and three calves," Boonsong recalls. "We were very optimistic and some of us thought this could be our last chance to accomplish a capture."

But fate cruelly intervened. The rescue venture was called off after a team member stepped on a landmine and was badly injured.

Several wildlife organisations, including the IUCN, WWF, the London-based Flora and Fauna Preservation Society, Boonsong's Association for the Conservation of Wildlife and the recently formed Wildlife Fund Thailand, are ready to mount rescue missions. So far they have had no opportunity to do so.

"I lie awake at night and try to think how we can save this species" says Boonsong, "it is so important to do." But sadly, hopes for the kouprey are dwindling, largely because search and

rescue missions are at present not possible in Vietnam, Laos or Cambodia, either because of war or political sensitivities.

A group of conservationists keen to save the kouprey met informally in Bangkok earlier this year to review the situation. They were slightly buoyed by reports filtering through to the Thai capital that a Vietnamese zoologist had confirmed a few kouprey were still alive in Vietnam. There are also other unconfirmed reports of the animal being sighted in Laos and along the Thai-Cambodia border.

Because of the delicate situation in Indochina, the overriding question for conservationists is how can rescue missions be coordinated between wildlife organisations prepared to mount and finance them and the governments in the region?

One hope is that a neutral "third-party" nation can act as an honest broker to organise access for rescue missions into those troubled areas where kouprey may still exist. But whether there is a neutral nation with the will and influence to take on this task is far from clear. If none steps forward, then the kouprey could be doomed. □

This article first appeared in *ASIA* magazine earlier this year.

Gaia continued

the final chapter entitled, "The Cost of Militarism," where it states that even 10 percent of one year's global military expenditures, if diverted, could provide clean water and sanitation for over 2 billion people! Many other examples in this vein abound.

The solutions of our myriad environmental problems are far from clear, and the Atlas does not profess to know what they are. However, this book is more than merely a repackaged tome of doom and gloom on the modern human predicament. There is an underlying current of optimism flowing through these pages, an optimism centered on the great resilience and potential of the earth and of humankind. Gaia has given us much for which we should be thankful. The first step down the road of global responsibility may be to read this book and then, instead of placing it on your shelf to gather dust, lend it to a friend.

The Gaia Atlas of Planet Management
Norman Meyers: General Editor
Pan Books, 1985, pp 272

Steve Shipe is a graduate student at the School of Natural Resources pursuing his interests in international conservation and endangered species.

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Resources. . .

World Wildlife Fund-U.S. and The Conservation Foundation have joined forces that became effective October 1, 1985. Mr. William K. Reilly (president of The Conservation Foundation) became the president of World Wildlife Fund-U.S. and Mr. Russell Train (former WWF-US president) became chairman of the board of both organizations. The Conservation Foundation is a nonprofit environmental research organization based in Washington, D.C. and is best known for its comprehensive reports on the state of the environment, national parks, toxic substances, and water resources, and for its efforts in environmental dispute resolution.

Programs in both organizations will remain intact. WWF-US will continue to emphasize international conservation action projects designed to protect biological diversity by promoting a balance between people and their natural resource base. The Conservation Foundation will concentrate primarily, though not exclusively, on the domestic environmental agenda through policy research. Both organizations will consolidate offices as of November 4 and will be located at 1255 23rd Street, NW Washington, D.C. 20037; Tel: 202-293-4800. (*WWF Focus*, Sept./Oct.)

Primate Conservation — the Newsletter and Journal of the IUCN/SSC Primate Specialist Group is published twice a year by the WWF-U.S. Primate Program. The January issue with 115 pages contained numerous articles pertaining to primate conservation, announcements of field positions, educational materials and new publications, news from the field, and news from captivity. Non-members of the Primate Specialist Group interested in receiving the newsletter/journal may subscribe for \$10 per year. For further information write: Bill Konstant, Department of Anatomical Sciences, Health Sciences Center, State University of New York, Stony Brook, New York 11794.

The first issue of *Lion-Tales*, the Lion-Tailed Macaque Newsletter, appeared in the winter of 1984 and is published on a quarterly basis. The purpose of the newsletter is to facilitate communication among those involved in maintaining the lion-tailed macaque in captivity and conserving it in the wild. For more information write: Ms. Helena Fitch, Editor, Research Department, San Diego Zoological Society, P.O. Box 551, San Diego, California 92112.

Endangered Plant Species of the World and Their Endangered Habitats: A Compilation of the Literature (1985) updates the earlier 1978 edition. It contains 1647 references to published literature on endangered plant species of the world and their habitats. Arranged alphabetically by author, it begins with a list of general references on plant conservation, bibliographies, and laws and legislation. The second section is arranged geographically with a regional list of countries defined in the introduction. The third section on conservation and preservation, is subdivided into cultivation and propagation; parks, preserves and reserves; genetic resources and seed banks; and data gathering and organizations.

Resource information provided by Jane Villa-Lobos, Smithsonian Institution.

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