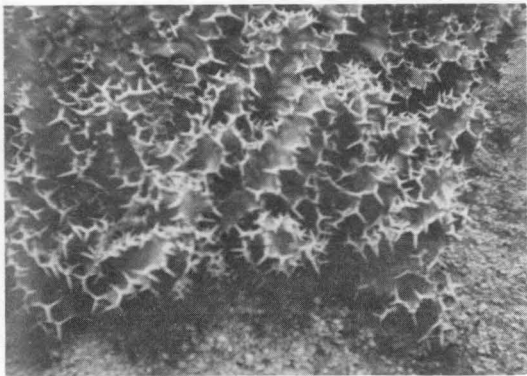


Cacti are easy plants to care for. Once potted properly they are perfectly content for a long period of time without anything more than water and a little supplementary food. A good basic soil mixture for cactus is a controversial subject. Personally, I find a good mixture to be one part loam, one part sand (or decomposed granite) and one part leafmold. To this mixture I add the following, for cactus only, to a one gallon mixture: four heaping teaspoons of bone-meal, three heaping teaspoons of gypsum and one heaping teaspoon of superphosphate (this amount can vary). The bone-meal is a slow acting fertilizer while the other two ingredients are an aid to better flowering. The Epiphyllum family, which includes the ever popular Christmas Cactus, should have at least 25% extra leafmold in its mixture. Fertilizing can be done occasionally when watering but it is very important not to overdo it.

Watering itself is another question. It is virtually impossible to give any kind of watering schedule for cactus. There are so many differences and needs between species. Depending on where one is located, what the plants are potted in (ground, clay pots, or plastic), every plant becomes an individual case and the nursery from which the plant is acquired usually becomes the best source for watering information. It is worth adding, however, that cactus have a winter resting period, when little or no water is given.

So many people have turned to the collecting of cactus because in small areas one can have an incredible variety. There



Euphorbia "zig-zag" — this and other succulents are often mistaken for cactus.

are not only many different sizes and shapes but great variations in color of the basic plant itself. One can even have some of the most beautiful flowers in the plant world in the Cactus family. The Epiphyllum, for example, is known as the orchid of the cactus family. In large landscape projects cactus are also being used as spectacular specimens.

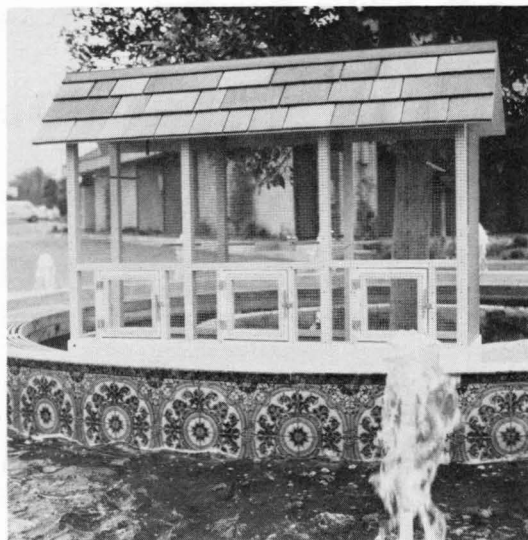
In all, cacti deserve their current popularity, and they should be included in gardens whether very grand or very small.

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THE DILEMMA OF THE AMERICAN ZOO

Can it be legislated out of business?

By Frank S. Todd

Corporate Curator of Birds, Sea World, San Diego, Ohio, Florida

By now almost everyone associated in any way with exotic animals has come to realize that American zoos have fallen upon hard times. Strange as it may seem, the realization of this fact is more encouraging. Collectively, North American zoos have finally acknowledged that we are in trouble. The problem is not a simple one, but rather is most complex and can be construed as a sign of the times. Simply stated, this great country of ours has become a victim of overaction and the pendulum has shifted from the far right to the far left, and unfortunately emotion is overruling logic.

This phenomenon, although not occurring overnight, appeared very rapidly. It began in the mid-sixties when the word "ecology" became vogue and really began to gain momentum in 1969 during the Santa Barbara oil spill. Zoos themselves were not affected until 1972. Had the zoological world recognized at that time what was happening, our problems would not nearly be as great today as they presently are. Some of us have been outspoken on the matter and have been subjected to some unjust criticism from our colleagues. In 1972 in Portland we tried to point out what would happen to zoological collections with regards to marine mammals if the proposed Marine Mammal Protection Act went through as proposed. During the regional meeting in 1973 we tried to stress the dangers and increasingly powerful role of the protectionists in Washington. In 1974, in Canada, we even went so far as to designate the American zoo as an endangered species. These warnings were considered by many to merely be scare tactics, but unfortunately, time has proven there is indeed a definite "anti-zoo" movement and it is gaining momentum. But the important thing for us is the fact that the feeling of security among ourselves is over and that most, if not all zoos, now realize that we are in for a fight for survival. The opposition truly believes that zoos are evil and

must be eliminated. Once zoos realized their intention, we began to make some progress — not much, but a start, and that is significant.

A review of the situation up to now might be beneficial to some. What happened? How did it happen? In retrospect, it would appear that the movement started with the era of "ecology" in the mid sixties. True, rape of North America had been permitted and as more people became aware of it, they rebelled. However, as time wore on, the movement became fashionable and everyone was leaping on the bandwagon. Those of us that had devoted our lives to biological sound conservation projects were initially most impressed with the upsurge of interest. But as these organizations became more vocal and militant, biological concepts and common sense practice fell by the wayside. Even remote field and behavioral studies came under attack. Possibly the biggest contribution to all of this was the power of television. As a result, almost overnight the country was overrun with instant "biologists and ecologists", courtesy of the tube. At that point, the conservation movement began to fragment into a number of well defined diverse segments — the true dedicated conservationists who really care and take the time to get the facts; the protectionists; and finally the hard core fanatical tree-huggers or deep breathers. True conservationists are realists and deeply committed, but at the same time see things as they are, not through rose-colored glasses. Generally they are able to grasp biological concepts and recognize that conservation is a long term complex problem with no instant solutions. They acknowledge that some progress is inevitable and understand the meaning of compromise. The protectionists, on the other hand, believe that instant changes and solutions are possible and that all of these problems are black and white. They feel, for example, that "Freeways are bad, because they kill

flowers and rabbits. The solution is simple — no more freeways and eliminate those that we have. Obviously then, the rabbits and flowers will return."

They do not accept the concept of compromise. However, there is an even more dangerous group — the Washington tree-huggers. These people can be termed fanatics and are generally special interest groups. They frequently ooze with money. As opposed to the other two types, which are probably genuinely concerned (although uninformed in many instances) the tree-huggers do not exhibit such concern. But because it is fashionable, they are able to create many waves and are constantly in the news. This new found notoriety is an extremely strong motivating force. The more noise they make, the more coverage they get. They maintain full time Washington offices and some groups retain \$50,000.00 a year attorneys to keep issues stirred up and to discover new ones. Their pulses do not get going in the morning until after they have read the Federal Register. The constant pressure they bring to bear on the legislators is unbelievable (although it should be believable now).

As a result of their tactics and manipulations, the torrent of recent adverse unwarranted animal-related legislation is with us. They were able to get away with it simply because we were too busy and looked upon them as kooks. Their credibility was not challenged and our side was not presented. The picture today is not bright, but it is better than it was a year ago merely because we in the zoo business are now responding and we are beginning to fight back — collectively.

The credible saga of zoo problems began in earnest in August of 1972 when the USDA imposed retroactive avian importation ban went into effect. This was closely followed in December by the Marine Mammal Protection Act. In 1973 the new Endangered Species Act became effective as well as the beginnings of the Inter-