

The saga of the profes

For Penn State professor, Dr. Robert Cowan, capturing these tiny, elusive

BY JACK HUBLEY
UNIVERSITY PARK — The professor kneels amid the crisp straw and strokes the head of a small, timid mammal no bigger than a housecat. The delicate pointed muzzle, flag of a tail, and long slender legs terminating in tiny black hooves give the animal the appearance of a miniature deer. It's just that the scale is all wrong. At a mature weight of nine pounds, this pint-size African antelope known as a blue duiker (pronounced di-ker) could rest comfortably in a shoe box.

But the duiker's similarity to the deer family is more than skin deep. These antelope are true ruminants, or cud-chewers, possessing the same four-compartment stomach as the deer, sheep, goats and cattle.

The advantages of using such a tiny ruminant in forage research becomes apparent when duikers are compared to sheep, a commonly used research animal.

Forage experiments done by Penn State's College of Agriculture typically require about 300 pounds of feed per sheep, says Dr. Robert Cowan, professor emeritus of animal nutrition.

"With blue duikers we can do an evaluation with as little as 10 pounds of forage," Cowan points out, "and the forage can be produced under controlled conditions in growth chambers." The amount of seed needed to produce this much forage may be only 30 to 40 grams, says Cowan, while one sheep experiment may require four or five pounds.

And duiker experiments can be carried out in much smaller facilities. A group of 64 animals, for example, will permit the

researcher to do 16 trials in a room hardly big enough to accommodate four sheep.

All of the inherent advantages of

small antelope research became apparent to Cowan soon after he joined the College of Agriculture faculty in 1948.



One of the virtues of blue duikers is their docile temperament as demonstrated here by research aid Marsha Michalec and Desi.

"When I first saw the dik-diks (another species of small African antelope) at the Philadelphia Zoo," recalls Dr. Cowan, "I thought it would be a great thing if we could use animals of that size in forage studies."

But it wasn't until 1974, during a photographic safari to South Africa with the Wildlife Society, that Cowan began to lay plans to bring African antelope back home to the States.

The professor soon returned to Africa on sabbatical, armed with a list of antelope species he was prepared to consider for research purposes.

Upon arriving in Pretoria, South Africa, in September of 1975, one of the first stops for Cowan, his wife Lois, and daughter Laura, was the Pretoria Zoo. The researcher soon found himself in front of an enclosure housing a female duiker that had just given birth.

"She walked over to the fence, so I offered her a couple of oak leaves, and she took them right out of my hand," Cowan remembers. "Here I was in South Africa only half a day and I'd already found duikers reproducing in captivity and tame enough to eat from my hand. Right there I forgot about the rest of the animals on my list."

But the Penn State professor was soon to find out the the duikers' small size and gentle nature belied the herculean task of removing them from their native continent. Indeed, the naive researcher couldn't have selected a more exhausting chore had he chosen to import a herd of African elephants.

After observing the captive antelope for some time, Cowan soon came to the realization that

he knew more about them than the zoo's director and keepers.

"Because they were shy animals and lived in thick, brushy country, nobody could tell me much about them, or how I could go about capturing some," says Cowan.

After a considerable amount of detective work, Cowan was contacted by a graduate student who knew of a healthy population of duikers located within a park used as a private retreat by the prime minister of South Africa.

Meanwhile the professor also located a number of the antelope in a zoo located in the South African town of East London. Arriving in East London with a supply of alfalfa acquired in Pretoria, Cowan convinced zoo personnel to permit him to run a series of pilot forage experiments using four of the animals.

"The results convinced me that, if they could be had, blue duikers were the ruminants we were looking for."

The Natal Parks Board granted Cowan permission to capture three pairs of duikers from the prime minister's retreat, a job that was accomplished in one day, thanks to the aid of 28 park volunteers and 200 yards of netting.

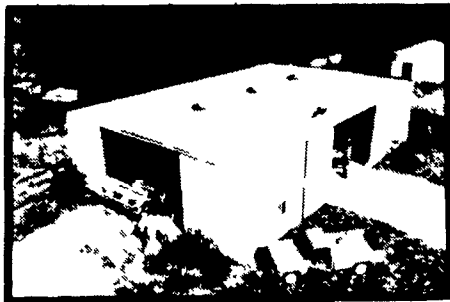
With the end of his sabbatical drawing near, Cowan drove the 500 miles back to Pretoria and headed for home to make arrangements for importing his animals. But when confronted by the extensive quarantine procedures necessary, the professor realized that importing the antelope in such small numbers wasn't practical.

Another year passed, and in November, 1976, Cowan returned to South Africa with permits to capture 24 antelope and quarantine

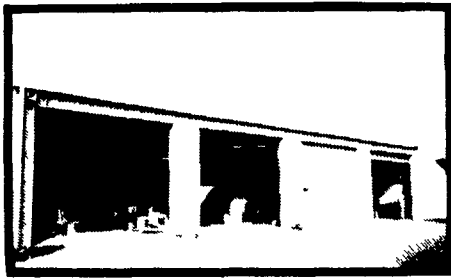
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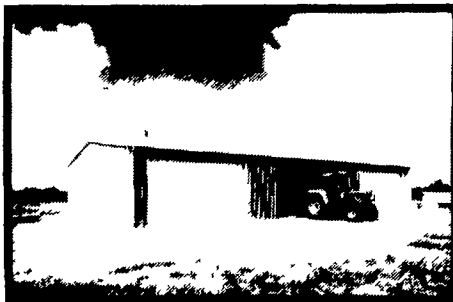
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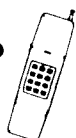


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