



International Symposium

From September 23 to 25 of this year, the First International Symposium on Antler Development in Cervidae was held at the Caesars Kleburg Wildlife Research Unit of the Texas A and I University in Kingsville, Texas.

This report comes from Dr Jimmy Suttie who attended on behalf of Invermay, where he is based, as a guest of the Wildlife Research Institute.

Envious eyes on New Zealand

AS THE first of its kind, the aim of the symposium was to provide an international forum where behavioural, genetic, endocrine, photoperiodic, nutritional and management aspects of antler development could be discussed.

In all about 120 scientists, wildlife biologists and game managers attended, the vast majority of whom were from the United States, with other participants coming from France, Poland, Czechoslovakia, India, Canada, Chile and the Netherlands.

Velvet antler production

The plenary paper on velvet antler production was given by Professor Jack Luick of the Institute of Arctic Biology, and a world-renowned expert on the velvet antler industry. He reviewed velvet antler production techniques and species of deer used on a world-wide basis, extensively describing

the methods used by reindeer herders in Alaska.

He also cast envious eyes on the deer farming infrastructure in New Zealand, as that permitted optimal harvest of a top-quality product, whereas the Alaskans are obliged to velvet every animal in the herd (bulls, steers, cows but not calves) at the same time, irrespective of whether the velvet is high or low-grade at the time.

Also of interest, was his review of the preparation techniques used to produce pharmacological preparations from the antler, and the regional differences in preference. For instance, although dried antler is preferred in Korea, this product is unacceptable in Taiwan where the antler is used fresh. However, fresh frozen antler is acceptable.

Professor Luick concluded his address by discussing the world market for velvet antlers — a market he considers to be unpredictable, due to political un-

rest and instability, particularly in Korea. He estimates the world trade in antlers to be 30 — 40 tonnes annually. The USSR and China largely produce velvet antler for home consumption, and trade only a small proportion.

Nutrition and antler development

Duane Ullrey, Professor of Animal Husbandry at Michigan State University, discussed nutrition and antler development in whitetail deer. Dr Ullrey considers that 16 per cent crude protein, 0.5 per cent calcium and 0.28 per cent phosphorus, of dietary dry matter, is necessary to support normal antler growth in yearling whitetail deer.

Further, he pointed out the enigma of calcium metabolism involved with antler growth. That is, although it may be shown that a stag can obtain his entire calcium requirement for antler development from the diet, in doing so, he

depletes his skeletal calcium reserves, irrespective of diet quality.

Genetics

The effect of genetics on antler quality in whitetail deer was the subject of the paper presented by D. Harmel of Texas Parks and Wildlife Department. He showed that, although environment has the largest effect on body size and antler size, the number of points is genetically determined. In a further paper, written in conjunction with others, he also concluded that a single dominant major gene was responsible for the number of antler points.

Dr M.N. Smith of the University of Georgia's Savannah River Ecology Laboratory, talked about genetic variability and antler growth in a natural population of whitetail deer. His theory is that body weight and age determine most of the variability in antler size, and particularly in body weight.

Behaviour

Dr Ludek Bartos of Prague, Czechoslovakia, presented a paper entitled "The Influence of Social Position on Antler Growth in the Red Deer Stag". He has found that the dominance position (rank) of each stag correlated more strongly and positively with antler weight, length and number of tines, than age. However, as his stags were virtually feral he was unable to weigh them.

Among the well known antler biologists attending the symposium was Professor Zbigniew Jaczewski, of Poland, who many New Zealand deer farmers will recall was the guest speaker at the 1980 conference of the New Zealand Deer Farmers Association. He asked to be remembered to those who had made his trip so enjoyable.

A tour was made of the King Ranch, home of the Santa Gertrudis breed of cattle. This breed, comprised of 3/8

Brahman-5/8 Shorthorn, originated in an attempt to cross drought- and disease-resistant native cattle with quality meat producers. We also visited the Bob and Bessie Welder Wildlife Refuge. This consists of 3,157 hectares of land, none of which has ever been cultivated, and which has been set aside for wildlife conservation and education. In general, the standard of presentation and discussion was high, and those attending displayed a high regard for New Zealand's enterprise in deer farming and showed great interest in the management techniques that have been evolved.

From New Zealand's point of view the importance of nutrition, and in particular sufficient protein for antler production, was stressed. If body weight is a major determinant of antler size, then selection of large-sized stags (and presumably hinds) will in turn lead to larger antler yields.