XYLAZINE IMMobilIZATION OF WAPITI: ANTAGONISM WITH YOHIMBINE AND
4-AMINOPYRIDINE

CHRIS D. OLSEN, and LYLE A. RENECKER, Department of Animal Science,
University of Alberta, Edmonton, Alberta T6G 2P5

Abstract: Trials were conducted to assess the effectiveness of yohimbine
and 4-aminopyridine as an antagonist for xylazine sedation in wapiti.
Treatments consisted of xylazine immobilization followed by unantagonized
recovery, and xylazine immobilization followed by antagonist
administration. Eight wapiti were paired according to sex, age, weight
and behavior. Each animal was randomly assigned a treatment order
according to a modified latin square design (treatment x sex). Treatments
were generally separated by a 6-7 day interval.

Tame and tractable cows were immobilized by hand syringe injections
of 0.65 mg/kg of body weight of xylazine (IM). Wild, free-ranging bulls
required dosages of up to 2.18 mg/kg of xylazine, administered
intramuscularly by a Cap-Chur gun, for effective immobilization.
Xylazine-immobilized wapiti were sternaly recumbant for periods ranging
from 178 to 265 minutes. Generally, short induction times and prolonged
immobilization were observed among the more tractable animals.

In antagonist treatments, xylazine-sedated wapiti were given con-
current intravenous injections of 0.15 mg/kg of yohimbine and 0.30 mg/kg
of 4-aminopyridine. Wapiti receiving reversal drugs were standing and
ambulatory within 1.9 to 47 minutes from antagonist injection. Walking
times differed significantly between treatments (P<0.005), and four of the
eight animals were walking within 3 minutes of antagonist injection.

No mortality or complications resulted from the trials. Relapses to
profound xylazine sedation did not occur. The yohimbine-4-aminopyridine
combination appears to be a safe and effective antagonist of xylazine in
wapiti.