

PRELIMINARY REPORT OF IMMOBILIZATION TECHNIQUE FOR  
SITKA BLACK-TAILED DEER IN SOUTHEAST ALASKA

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During the winter of 1961-1962, an experimental project

was initiated to determine the effectiveness of various methods of drug delivery for immobilizing Sitka black-tailed deer in southeast Alaska and the feasibility of tagging a large enough sample to be of value for determining movements, estimate of population size, and a known age sample of jaws. The project was carried out in the vicinity of Wrangell Narrows near Petersburg.

Succinylcholine chloride (20mg/cc) was selected as the immobilizing agent. CO<sub>2</sub> dart guns, longbows with a "Palmer" syringe attached to the arrow, crossbow with a "Palmer" syringe attached to the bolt, and a crossbow with a syringe made from a .357 magnum case were tested. An 80 pound crossbow delivering the drug in a syringe made from the .357 magnum case was the most effective as well as the most economical method tested. A second trigger mechanism with a pull of 40 pounds was useful for short range. The crossbow was effective from 5 to 40 yards.

Deer were approached by skiff from the water as they fed along the beach. Twenty-eight deer were successfully tagged and released during an 11-day period. Effective doses ranged from 5.4 to 13.9 mg/cwt. The most satisfactory dose was 6.5 mg/cwt. The average time for immobilization from time of hit was 5.6 minutes. Complete recovery was effected in an average of 38 minutes after injection, ranging from a minimum of 17 to a maximum of 65 minutes. Hits were most effective in the heavy musculature of the neck, back, and hip. Artificial respiration was given in cases of respiratory depression. Two incidences of mortality occurred.

The use of succinylcholine chloride, delivered by a syringe mounted on a crossbow bolt, appears to be an efficient and inexpensive method for immobilizing Sitka black-tailed deer. A dog, proficient at trailing, would be valuable for locating deer which have been hit, and a small portable oxygen tank would be useful for treating apnea.

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