

A New Method of Argali (*Ovis ammon*) Capture using Horsemen and Drive-nets

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Abstract

Argali sheep (*Ovis ammon*) were live captured for radio-collaring using horsemen as the primary means to herd them into drive nets. Two adult argali ewes, one argali lamb, and one adult ibex ewe were captured by drive-netting in five days effort in Ikh Nartiin Chuluu Nature Reserve, Mongolia, in September 2002. This represents the first use of this low tech, efficient, and low cost method for live capture of argali.

Key words: argali, capture, drive-net, *Ovis ammon*

Introduction

Research and management of wild ungulates often requires the use of live captures (Jessup 1982). While helicopter net-gun capture is a commonly used method for capturing bighorn sheep in North America, especially in the deserts of the southwestern United States and Mexico (Kock *et al.* 1987, Jessup *et al.* 1988), this method is not practical in many parts of Asia because of the expense, or the lack of small manoeuvrable helicopters. With helicopter net-gun captures, the helicopter is flown without the rear doors and the net gunner is attached with a harness allowing him/her to safely lean out the door for a clear shot. A four barrel net-gun is used to deploy a 5m by 5m net over an individual animal, while 5m to 10m above it. Legs and horns become entangled in the net, immobilizing the animal. The helicopter lands nearby so the animal may be recovered.

Drive-net capture typically requires the same small maneuverable helicopters, however, other means of driving animals have been substituted, including vehicles and people on foot. Drive-net capture of bighorn sheep has worked by herding animals into a line of nets stretched across an escape route such as a natural gap in rocky terrain. Drive-net capture of Mongolian gazelle has been accomplished by driving animals into an opening in a circle of nets. In drive-net capture, the nets are loosely hung from poles that easily break or fall when animals run into the nets and become entangled. Sometimes nets are set in double or triple rows, to facilitate capture of additional animals that

would otherwise escape by jumping over the first or second row of falling nets.

Argali sheep (*Ovis ammon*) are well adapted to running; they have long legs to outrun their predators (Schaller 1998, Amgalanbaatar & Reading 2000). As such, argali behavior is unlike that of bighorn sheep (*O. canadensis*) because argali run for long distances across open terrain to escape a predator rather than running up into steep, rocky terrain (Valdez 1982). When pursued, argali will typically run in a line, following a lead animal, for several kilometers.

By utilizing local horsemen and drive-nets, it is possible to efficiently capture argali by taking advantage of their anti-predator behavior. We report here on the first successful capture of argali using horsemen and drive-nets in Ikh Nartiin Chuluu Nature Reserve, Mongolia, in September 2002.

Materials and Methods

A total of 250m of drive-nets (3m high by 30m long) were set up in a straight line along the bottom of a dry sandy streambed in Ikh Nart, Mongolia. Nets were constructed of soft 6mm braided synthetic rope knotted into a 15cm mesh. Nets were held up by 6cm x 6cm poles, alternating sides every 5m, with two poles holding up each end of a net. The nets were hung loosely from the top by a rope that was weaved through the netting, passed over the end poles and secured to the ground with rocks. Approximately 30cm of net lay on the ground so that the legs of animals would be easily entangled when they ran into the nets. The poles were 2.5m in length with a shallow notch cut in one end so that the nets would slip off the poles when animals