

## Re-evaluation of the C120 Magnum and Bionic® Traps to Humanely Kill Mink

In the search of humane killing traps, Proulx et al. (1990) and Proulx and Barrett (1991a) evaluated the ability of the C120 Magnum (no registered trademark) and the Bionic® (W. Gabry, Vavenby, British Columbia, Canada V0E 2A0) traps to humanely kill mink (*Mustela vison*) in simulated natural environments. Both traps initially passed mechanical evaluation tests, approach tests, and preselection tests; they also rendered nine of nine mink irreversibly unconscious in  $\leq 3$  min in kill tests. The researchers estimated that these traps could be expected, at a 95% level of confidence, to humanely kill  $>79\%$  of mink captured on traplines. We now believe that this performance level is incorrect. If a one-tailed binomial test is performed with an outcome of nine of nine or 13 of 14 successful kills, the traps can be expected, at a 95% level of confidence, to render  $\geq 70\%$  of mink captured on traplines irreversibly unconscious in  $\leq 3$  min (Zar, 1984). We consider that such a performance level still is very high since most commercial traps and inventions tested to this date did not pass the initial tests or have failed to meet the acceptance criterion of nine of nine or 13 of 14 successful kills in the kill tests in simulated natural

environments (Proulx and Barrett, 1989, 1991b).

### LITERATURE CITED

- PROULX, G., AND M. W. BARRETT. 1989. On the development and implications of the Conibear 120 Magnum trap to harvest marten and mink. In Proceedings of the Northeast Fur Resources Technical Committee, R. Lafond (ed.). Beauport, Quebec, Canada, pp. 194-209.
- , AND ———. 1991a. Evaluation of the Bionic® trap to quickly kill mink (*Mustela vison*) in simulated natural environments. Journal of Wildlife Diseases 27: 276-280.
- , AND ———. 1991b. Ideological conflict between animal rightists and wildlife professionals over trapping wild furbearers. North American Wildlife and Natural Resources Conference 56: 387-399.
- , ———, AND S. R. COOK. 1990. The C120 Magnum with pan trigger: A humane trap for mink (*Mustela vison*). Journal of Wildlife Diseases 26: 511-517.
- ZAR, J. H. 1984. Biostatistical analysis, 2nd ed. Prentice Hall, Englewood Cliffs, New Jersey, 718 pp.

Received for publication 3 August 1992.

Gilbert Proulx,<sup>1</sup> Iwona M. Pawlina,<sup>1</sup> and Raymond K. Wong,<sup>2</sup> <sup>1</sup>Wildlife Section, Forestry Department, Alberta Research Council, P.O. Box 8330, Postal Station F, Edmonton, Alberta, Canada T6H 5X2; <sup>2</sup>Environmental Research and Engineering, Alberta Research Council, P.O. Box 8330, Postal Station F, Edmonton, Alberta, Canada T6H 5X2.