

FILE COPY

SUMMARY OF THE GATES OF THE ARCTIC WOLF STUDY 1986 - 1991

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Wolf research in Gates of the Arctic National Park and Preserve began in 1986 to determine the status of wolves in the area and evaluate the effects of subsistence/sport harvest. In addition, we conducted research to evaluate influences of caribou abundance on winter wolf predation behavior (reported elsewhere).

We have radio-collared a total 51 wolves during April 1987, 88, and 89 (24M:27F; 13 pups:10 yearlings: 28 adults). Over the course of the study, we have had contact with 11 - 19 packs/pairs/lone wolves. As of April 1991, 10 wolves carried functioning radio-collars in 8 packs. Of the remaining 41 wolves:

- 7 are known to have dispersed;
- 8 are missing and probable dispersals;
- 9 have been harvested by subsistence hunters/trappers;
- 12 have died of natural causes or unknown causes outside the harvest season; and
- 5 have dropped collars or the radios have failed.

Radio-collared wolves have dispersed at rates of 46% for yearlings and 9% for those 2-year-old or older. Most of the dispersals (including missing animals) of older wolves (6 of 8) occurred when the wolves were 2- to 2.5-years-old. Wolves collared in this study have been relocated, through harvest or cooperative radio-trackers, as far as 450 miles (700 km) from the study area, and in all directions.

Wolves dying of natural causes were primarily killed by other wolves (6 known, 2 suspected). In winter 1990-91 a radio-collared wolf and 4 packmates were killed in an avalanche. The remaining 3 natural mortalities occurred outside the harvest season but the carcasses were either deteriorated upon investigation or not recovered.

Wolf densities in Gates of the Arctic are approximately 1 wolf/60 sq. mi. (6.5 wolves/1000 sq. km.) for a total population of about 200 wolves in the park. Packs in the study area have averaged 47% pups in the fall.

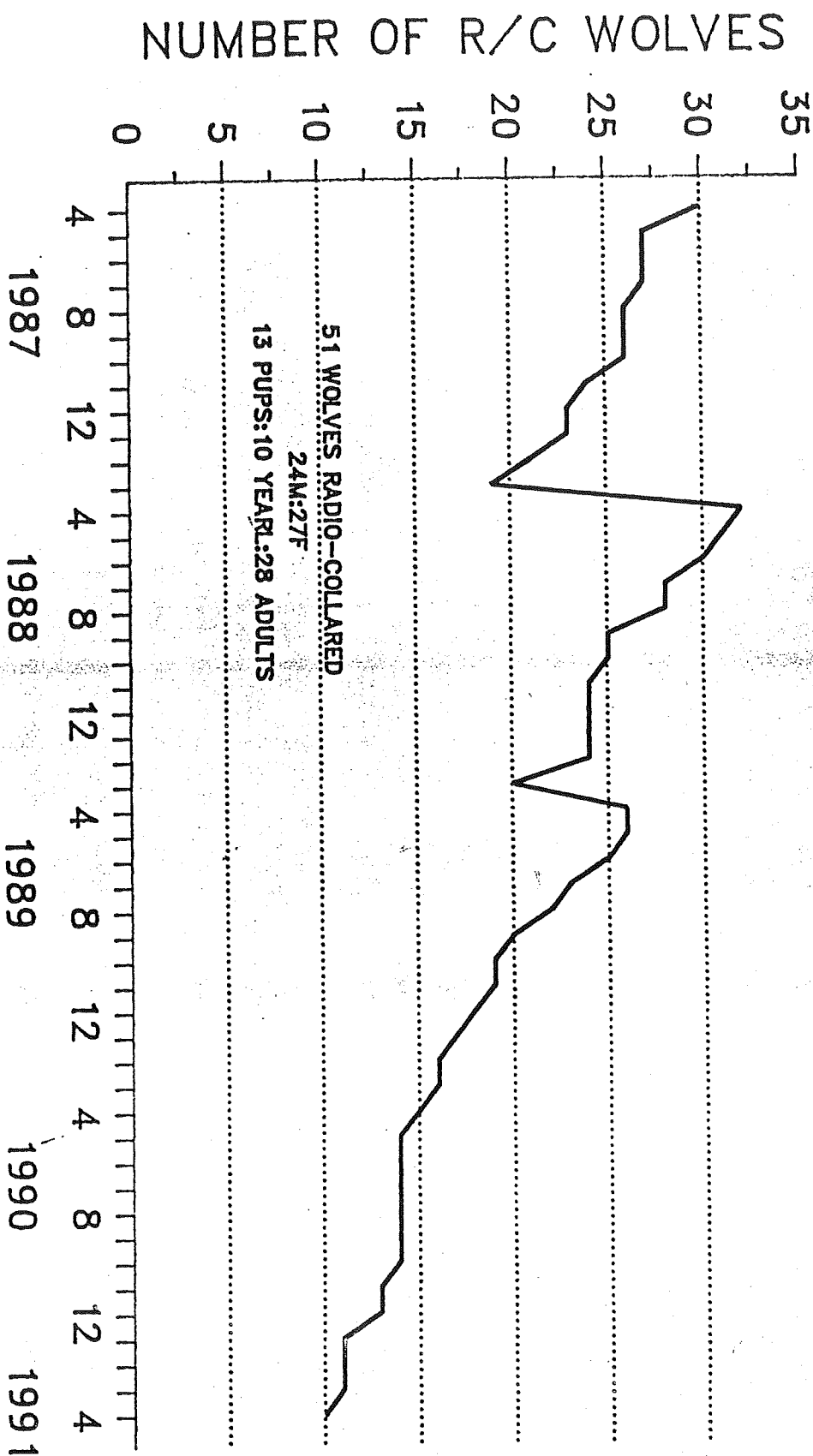
Wolves are harvested in the park by local residents. Virtually all of the harvest is by residents of Anaktuvuk Pass, a Nunamiut Eskimo village of about 275. During the six years of the study, Anaktuvuk harvest has averaged 60 wolves with 33 coming from within Gates of the Arctic. This harvest is composed of 62% pups and removes 17% of the Gates wolf population annually. Harvest occurs from November to April and leghold trapping and hunting from a snowmachine are the usual methods.

OBJECTIVES

Gates of the Arctic Wolf Study

- Determine Population Status
 - population size
 - productivity
 - survival/dispersal
- Determine Harvest Characteristics
 - number harvested/age structure
 - who/how/when
- Assess Harvest Effects

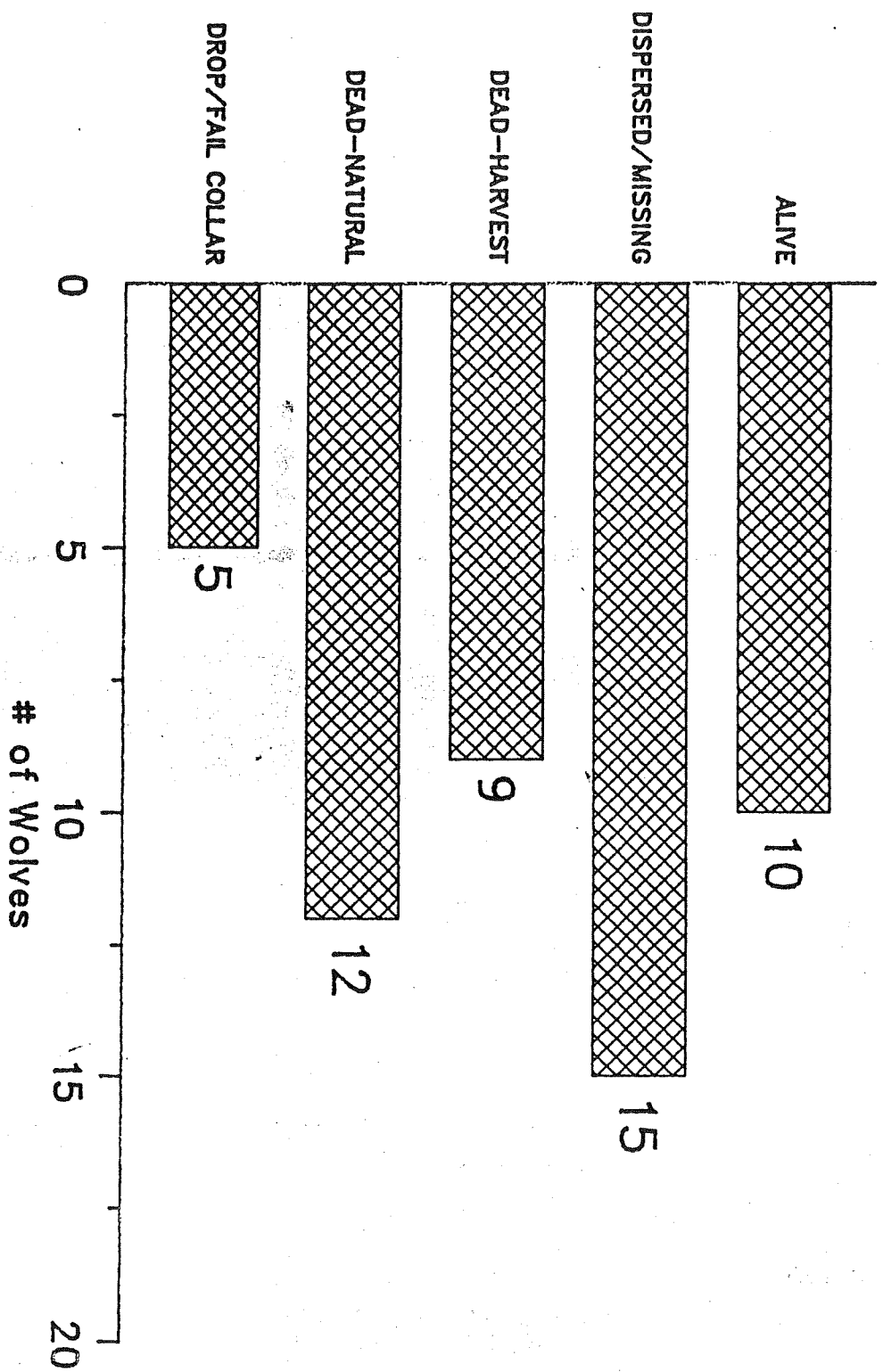
RADIO-COLLARED WOLVES BY MONTH GATES OF THE ARCTIC WOLF STUDY (MARCH 1987-APRIL 1991)



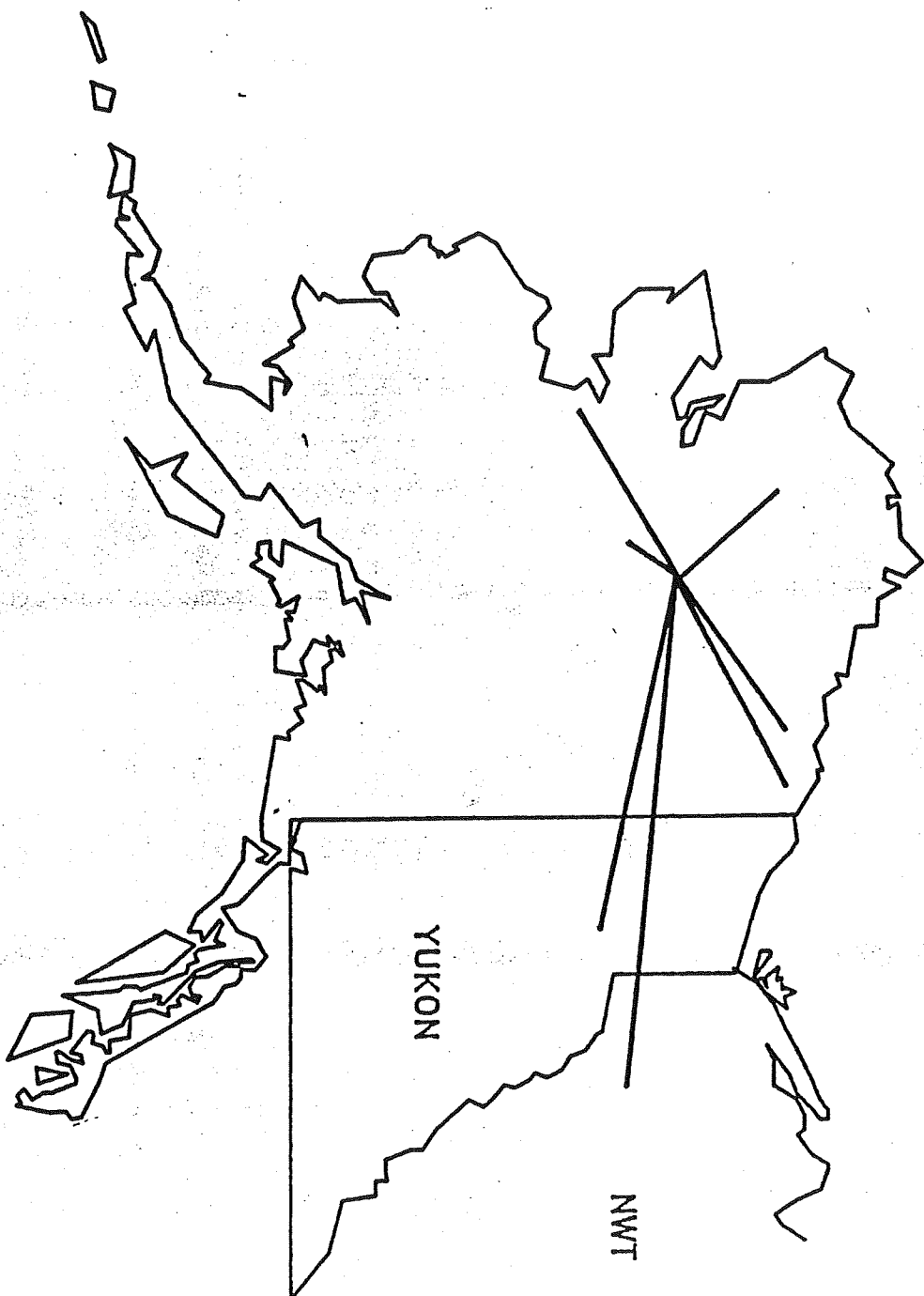
STATUS OF RADIO-COLLARED WOLVES

Gates of the Arctic National Park

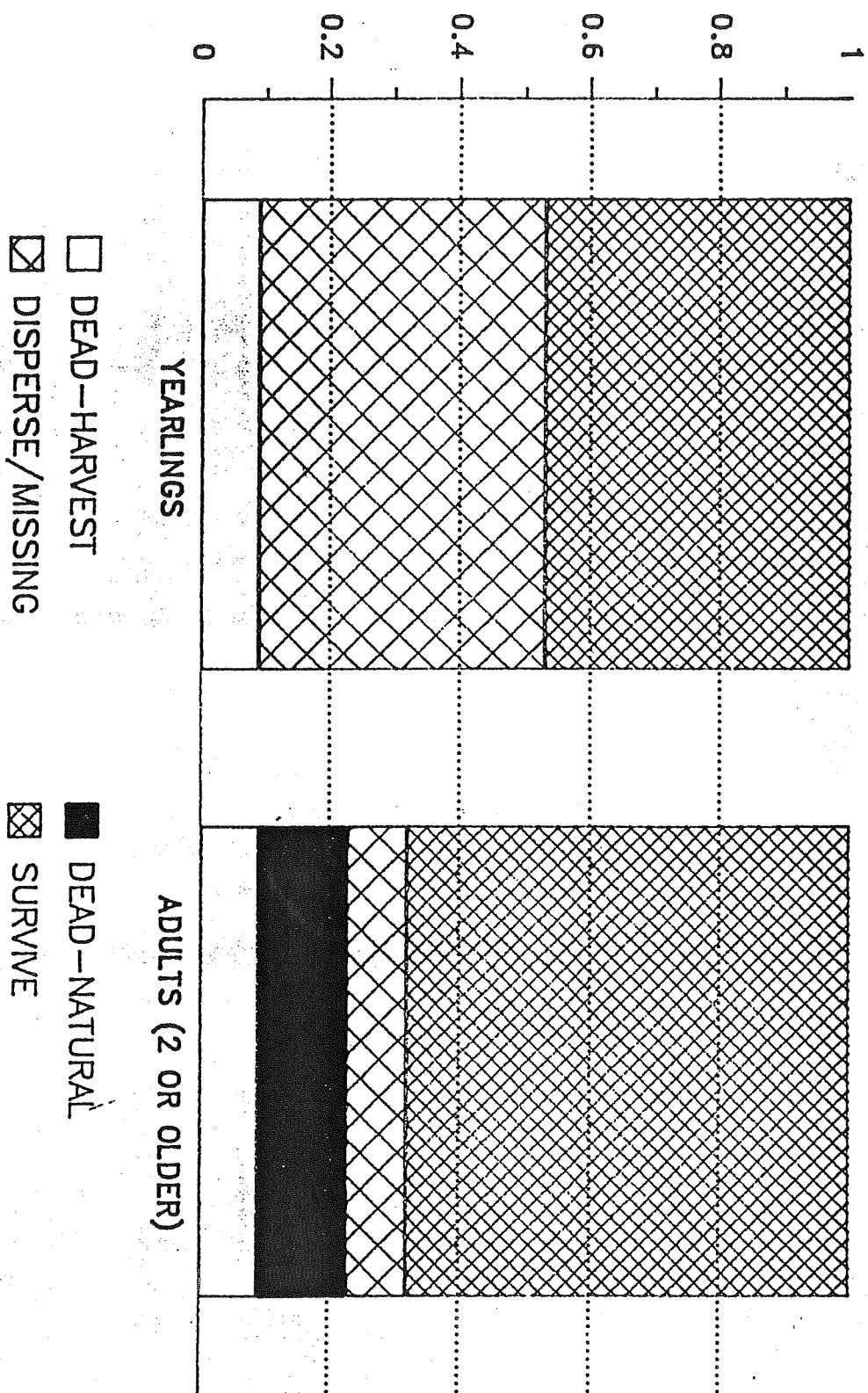
(MARCH 1987 - APRIL 1991)



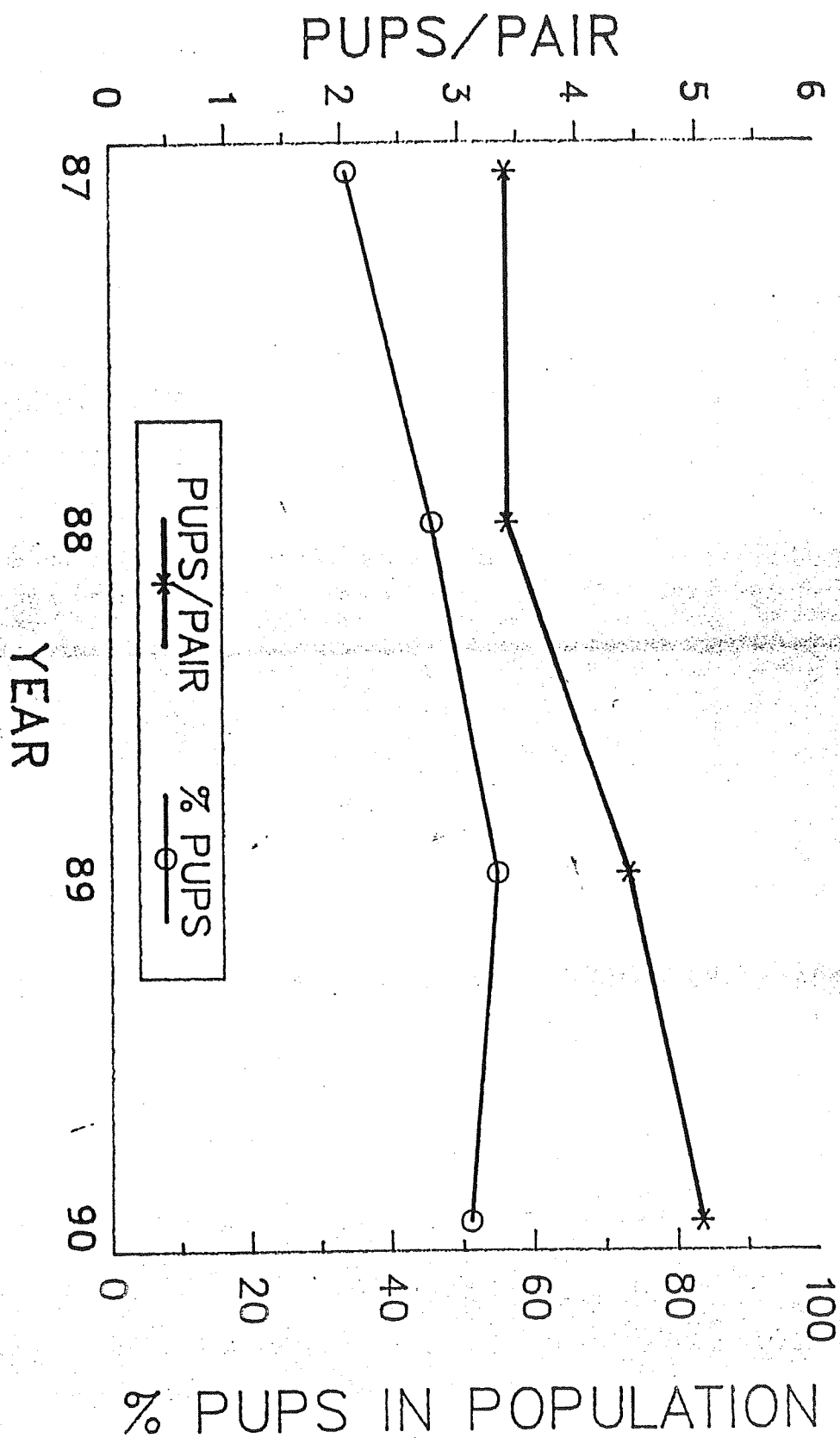
WOLF DISPERSALS
GATES OF THE ARCTIC WOLF STUDY 1987-91



"SURVIVAL" OF RADIO-COLLARED WOLVES GATES OF THE ARCTIC WOLF STUDY (MARCH 1987-APRIL 1991)

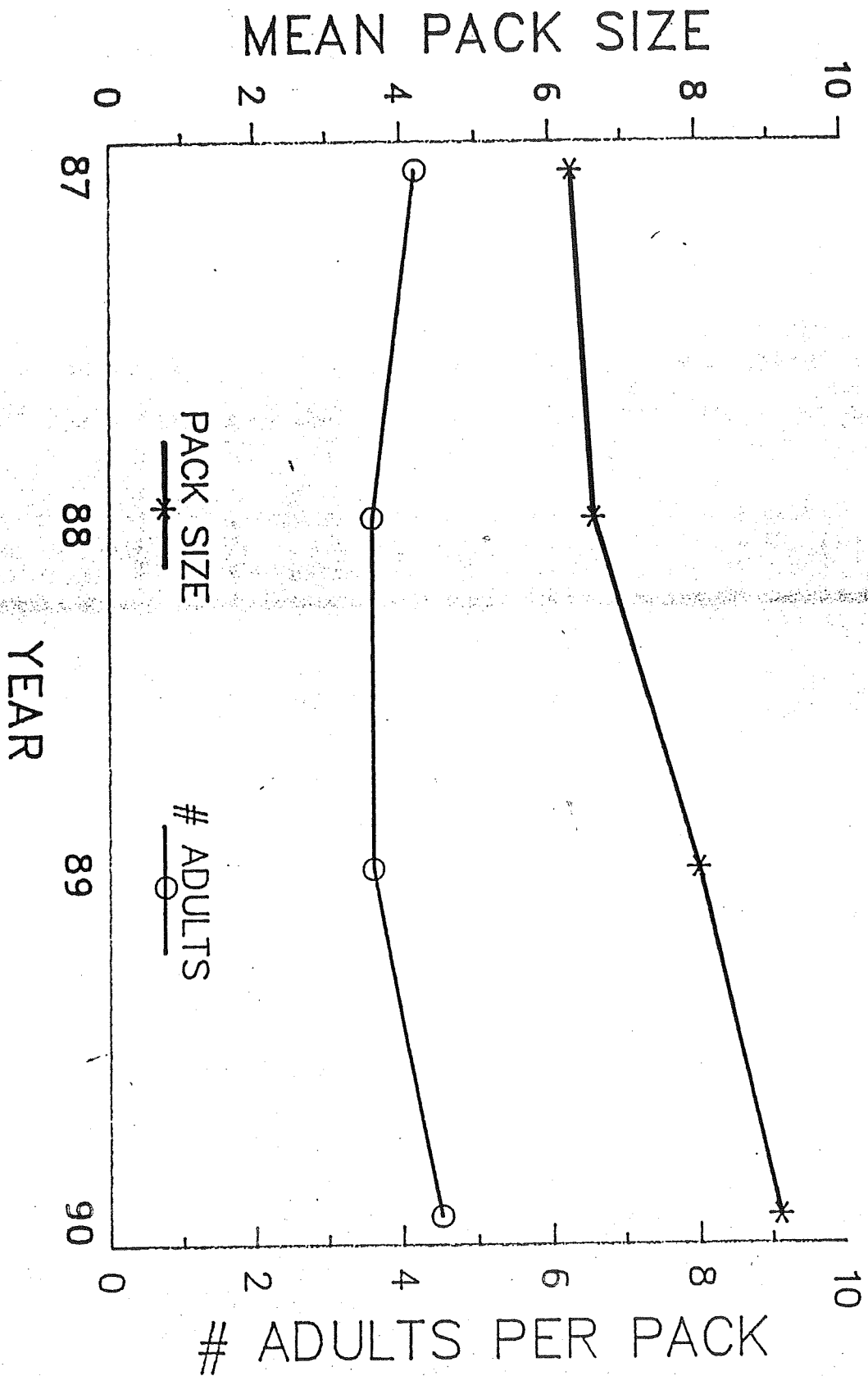


PUP PRODUCTION GATES OF THE ARCTIC WOLF STUDY (1987-1991)

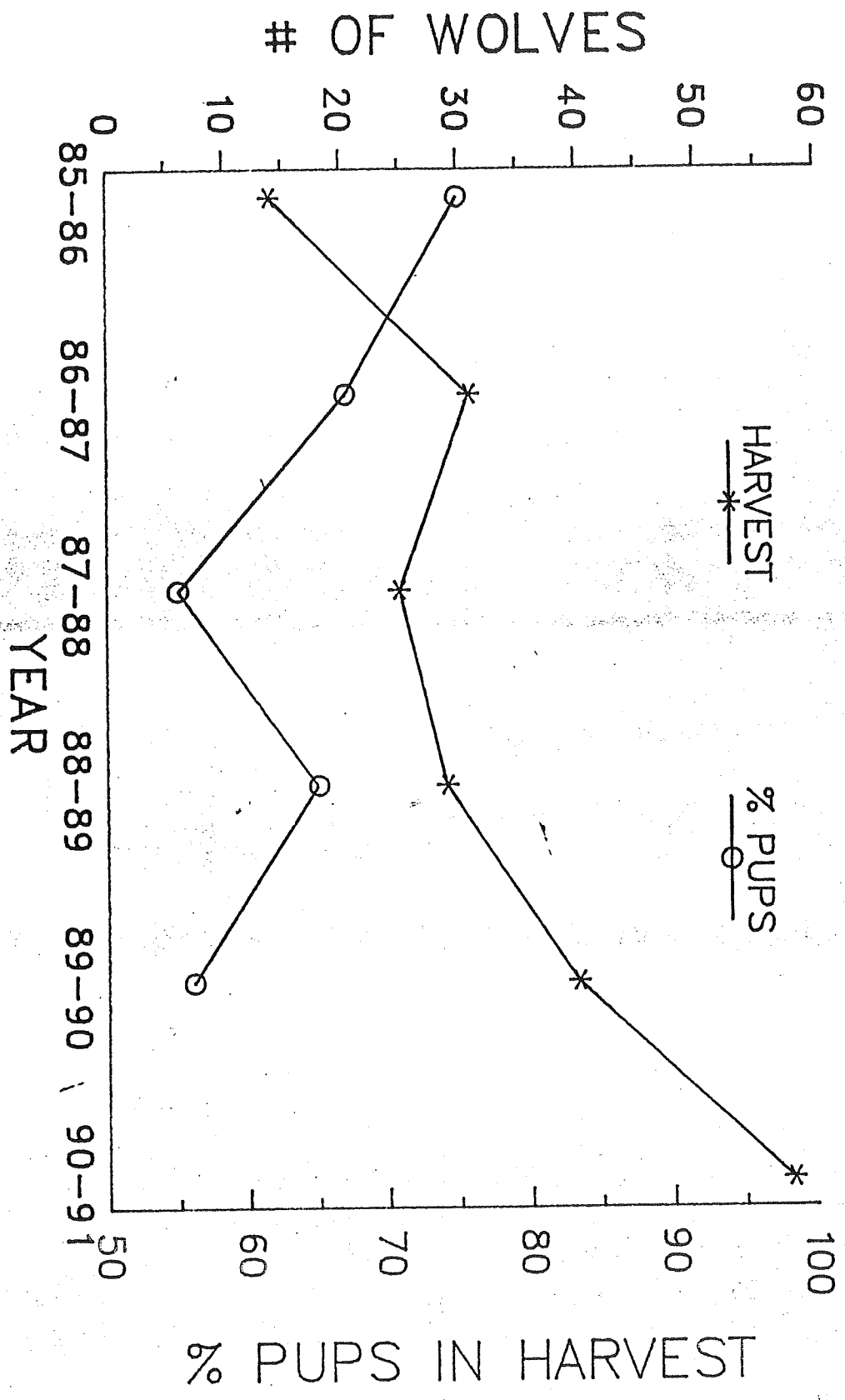


PACK SIZES AND COMPOSITION GATES OF THE ARCTIC WOLF STUDY

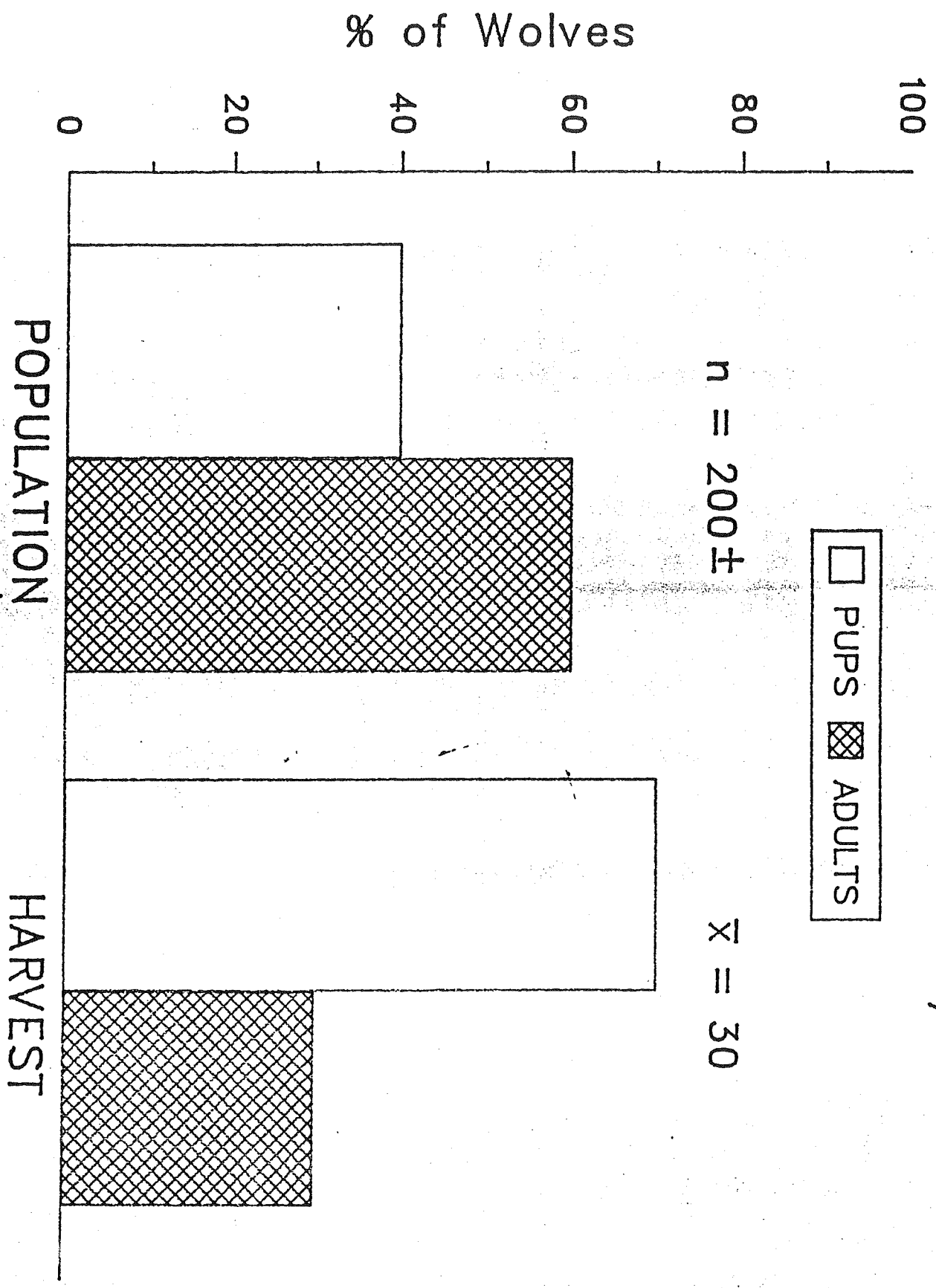
1987-1991



ANAKTUVUK PASS WOLF HARVEST IN GATES OF THE ARCTIC NP&P



Gates of the Arctic Wolf Study



GATES OF THE ARCTIC WOLF STUDY

AVERAGE HARVEST (17% WITH 62% PUPS)

FALL POPULATION

106 ADULTS

94 PUPS

HARVEST

13 ADULTS (12%)

21 PUPS (22%)

94 PUPS

21 PUPS HARVESTED

?? WINTER PUP

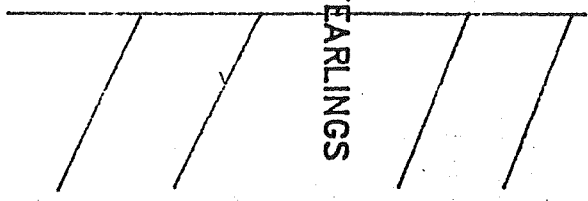
MORT/DISPERSAL

< 73 YEARLINGS

32 DISPERSE

7 HARVESTED

< 34 2-YEAR-OLDS RECRUITED
(TO REPLACE 13 ADULTS HARVESTED)



GATES OF THE ARCTIC WOLF STUDY

HIGH HARVEST (29% WITH 62% PUPS)

FALL POPULATION

106 ADULTS

94 PUPS

HARVEST

22 ADULTS (21%)

36 PUPS (38%)

94 PUPS

36 PUPS HARVESTED

?? WINTER PUP

MORT/DISPERSAL

< 58 YEARLINGS

26 DISPERSE

9 HARVESTED

< 21 2-YEAR-OLDS RECRUITED
(TO REPLACE 22 ADULTS HARVESTED)