

TECHNICAL NOTES

U.S. DEPARTMENT OF AGRICULTURE

WYOMING

SOIL CONSERVATION SERVICE

Biology No. 121

January 1986

Subject: YELLOW-BELLIED MARMOT*

General

The yellow-bellied marmot (Marmota flaviventris) inhabits rocky areas with adjacent lush green vegetation from 5,000 feet (1,524 m) to above timberline.

Food Requirements

Yellow-bellied marmots are herbivorous and eat many different forbs and grasses. Marmot populations are rarely limited by food availability. One study stated that food could possibly be limiting in spring or fall due to snow depth, although snow-free areas could usually be found.

In an alpine area on the Wyoming-Montana border, yellow-bellied marmots normally foraged only a few hundred yards from their borrows. Escape holes were dug when the marmots went more than 328.1 feet (100 m) from cover.



Prepared by: Richard Rintamaki, State Biologist


State Resource Conservationist

*Information taken from Ecoregion M3113 Handbook and Habitat Suitability Index Models, Wildlife Species Narratives (literature searches), U.S. Fish and Wildlife Service, various dates between 1978-1984.

Water Requirements

No specific water requirements were found in the literature. Water sources (including low marshy areas and runoff streams) are usually present within the marmot's home range.

Cover Requirements

Yellow-bellied marmots spend 80 percent of their lives in burrows and 60 percent in hibernation. Home burrows frequently have at least three openings and provide cover for resting, escape, hibernation, and reproduction. Auxiliary burrows, having one or two openings, are also dug and used when the marmots are unable to reach their home burrows.

Marmots generally live in colonies of two to five families. Each family occupies a separate den or burrow, but use the same feeding area. Burrow sites are not generally limiting for colonial marmots, although they may be limiting for non-colonial or transient marmots. Burrows are usually dug beneath rocks. Burrows are not dug under flat (2.0 to 3.9 in. or 5-10 cm thick) sedimentary rocks less than 15.7 in. (40 cm) in diameter or under large boulders where there is a large subsurface rock volume. Marmots are found in the alpine where there are exposed rocks with a diameter of 27.6 to 39.4 in. (70 to 100 cm) or larger adjacent to green vegetation.

Yellow-bellied marmot burrows in Colorado are found on well-drained slopes where the soil is very coarse and porous.

Marmots in this region hibernate from August until early May. The most suitable sites for hibernation burrows are where the snow accumulation is very heavy and provides adequate insulation.

Reproductive Requirements

Burrows are used as nest sites and the young generally appear above ground in late June or early July.

Special Habitat Requirements

Marmots use large rocks for lookouts and sunning sites.

Interspersion Requirements

The interspersion of grassy and rocky areas is critical to marmots because of their reluctance to wander far from cover while feeding. The home range size for female marmots in Colorado varied from 0.32 to 2.52 acres (0.13 to 1.02 ha) with some overlap of adjacent territories. The territory of the male marmot is vigorously defended against other males and has an average size of 1.66 acres (0.67 ha) with a range of 0.49 to 4.89 acres (0.2 to 1.98 ha). Territory size was correlated with the number of adult males or females in the area and all territories greater than 2.47 acres (1 ha) in size occurred in areas of low population density.

Special Considerations

Marmots are non-migratory, although young marmots may disperse during their second summer.