SAVANNAH SPARROW
Grassland/Agricultural Type

General

Open grasslands are the preferred habitat of the savannah sparrow (Passerculus sandwichensis) (Gabrielson and Jewett 1940). Within this Ecoregion it occurs primarily as a summer breeder in the transition zone, and is commonly found in open fields, plains, and meadows at lower elevations throughout western Washington and Oregon (Larrison and Sonnenberg 1968).

Food Requirements

The savannah sparrow eats mostly grass seed and insects (Norris 1960; Wiens 1969). Dragonflies (Odonata), butterflies (Lepidoptera), true bugs (Hemiptera), wasps, ants, and bees (Hymenoptera), aphids (Homoptera), spiders (Arachnida) and oligochaete worms were invertebrates eaten by the savannah sparrow in Wisconsin (Wiens 1969). Wiens (1973) stated that savannah sparrows concentrated their feeding around the perimeter of grass clumps and foraged primarily in low grass cover that was mostly under four inches (10 cm) in height (Wiens 1969). Cody (1968) found that savannah sparrows foraged on vegetation below 3 inches (7.6 cm) in height.

Water Requirements

No specific drinking water requirements were found in the literature. Moisture seems to be a factor through its influence on the density of low vegetation (Wiens 1969).

Cover Requirements

No specific information on cover requirements, other than for reproduction, was found in the literature. In most inland locations, cover needs seem to be satisfied by low-lying, moist, open grassy fields with scattered forbs in which the ground layer vegetation (grasses and accumulated litter) is fairly dense (Tester and Marshall 1961). Litter was found to be one of the most important features of savannah sparrow habitat. Linsdale (1938) concluded that the factor determining the local presence of the savannah sparrow in the Great Basin was the dense cover of low vegetation.

Reproductive Requirements

Male savannah sparrows establish territories during the breeding season (Wiens 1973). Territory size on a Wisconsin field ranged from .4 to 4.3 acres (.2-1.7 ha) with a mean size of 1.7 acres (.7 ha) (Wiens 1969). The breeding territory must satisfy all of the life requirements of the mated pairs and their young throughout the nesting season, as they will not travel outside their territorial boundaries. Scattered tall forbs, low shrubs, or fence posts and fence lines, if available, are used by the male bird to advertise and defend his territory through singing displays. Where sufficiently tall forbs are not present, small deciduous shrubs may be used as song perches (Johnsgard and Rickard 1957).

Wiens (1969) found an average of 600 forbs per .01 acre (.004 ha) on the savannah sparrow territories in his Wisconsin study. The mean

percentage of forb cover on savannah sparrow territories ranged from 20 to 35% depending on the time of territorial establishment with a range of approximately 15 to 42% (Wiens 1973). Wiens (1969) found that forb height within breeding territories ranged from 2.7 to 19.6 inches (7 to 50 cm) with a mean of 7.8 inches (20 cm). Savannah sparrow nests were constructed on the ground in dense grass vegetation and were well concealed. Nineteen of 27 nests were either partially domed or well placed under overhanging litter. All nests were located in areas having 100% litter cover. The entire nesting territory had greater than 64% litter coverage. The mean litter depth for nests was 3 inches (7.8 cm) with the majority of nest sites in litter greater than .4 inches (1 cm) in depth. The percentage of grass cover over most of the nesting territories ranged from 62 to 100% with a mean of 88%.

Special Habitat Requirements

No special habitat requirements were found in the literature.

Interspersion Requirements

Savannah sparrows remain within the grassland vegetation type throughout the year and they show no special need for any adjacent cover types.

Special Considerations

Hayfields and grain fields are utilized by savannah sparrows in place of natural grasslands (Larrison and Sonnenberg 1968). Of the three subspecies of the savannah sparrow that occur in western Washington, Brook's Savannah Sparrrow (P. sandwichensis brooksi) is the subspecies which breeds within the ecoregion. The three subspecies are listed as winter visitors West of the Cascades (Sonneberg and Larrison 1968).

REFERENCES CITED

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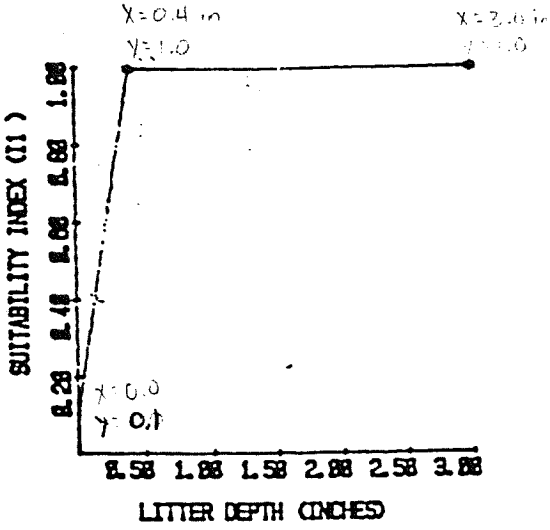
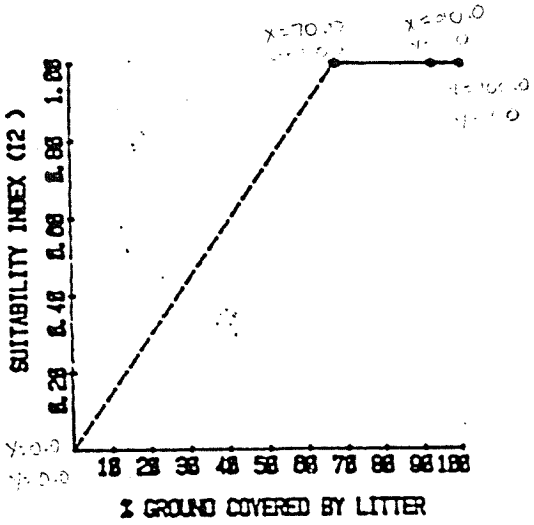
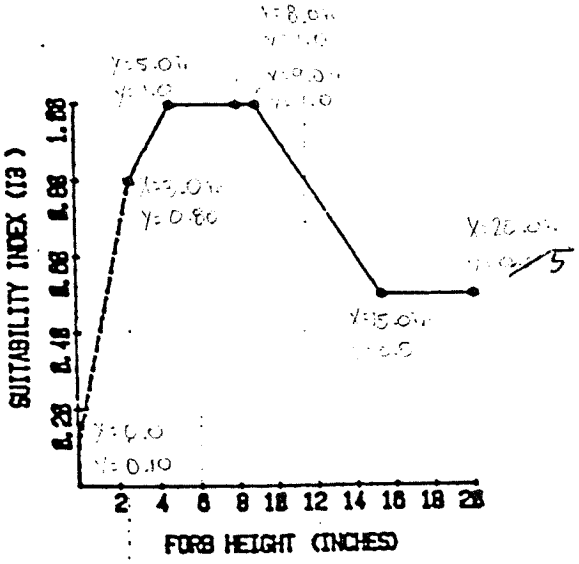
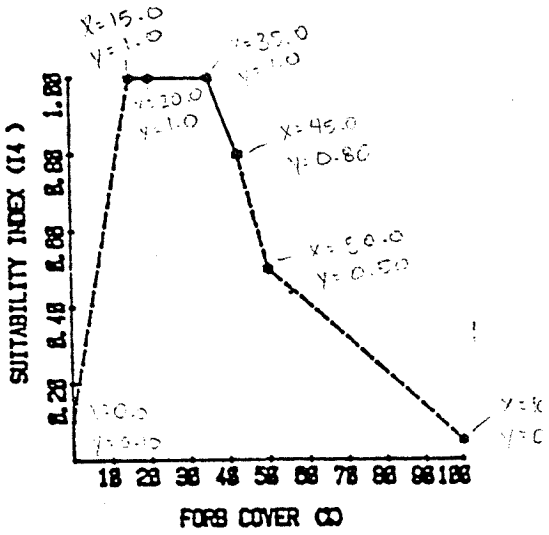
SAVANNAH SPARROW

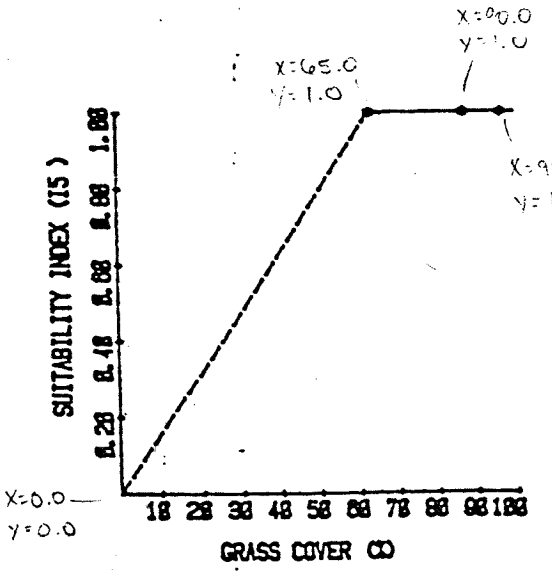
GRASSLAND/AGRICULTURAL











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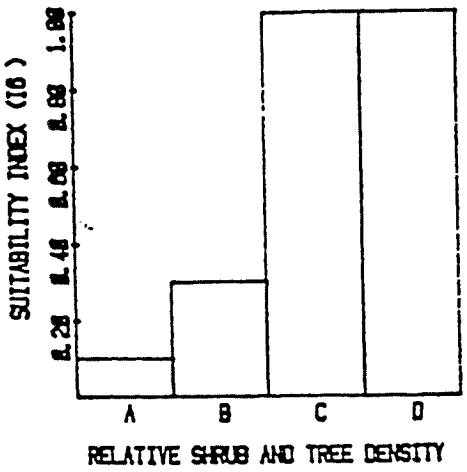
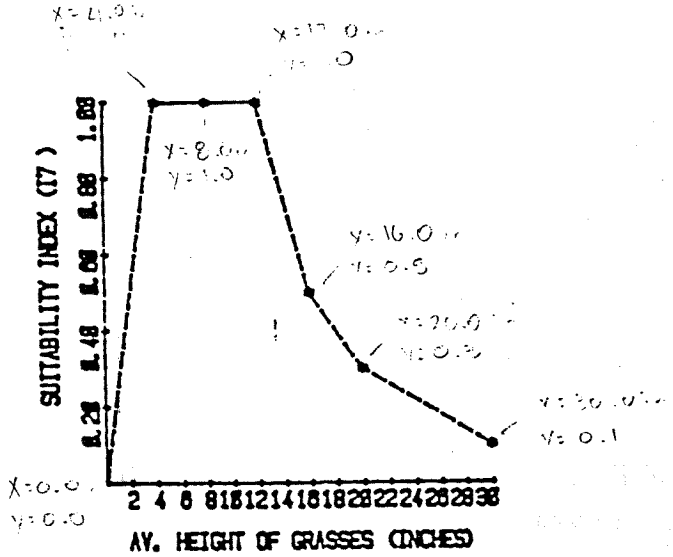
SAVANNAH SPARROW

GRASSLAND/AGRICULTURAL



A=TREES OR SHRUBS PREVALENT THROUGHOUT SAMPLE SITE
B=WIDELY SCATTERED TREES OR SHRUBS THROUGHOUT SAMPLE SITE (SAVANNAH)
C=NO TREES OR TALL SHRUBS PRESENT, A FEW LOW SHRUBS SCATTERED THROUGHOUT SAMPLE SITE
D=NO TREES OR SHRUBS PRESENT ON SAMPLE SITE



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June 1978

HABITAT SUITABILITY INDEX

Savannah Sparrow in Grassland/Agricultural Type

Ecoregion 2410

$$\underline{\text{Reproductive Value}} * (X_1) = \frac{(I_1 + I_2 + I_3 + I_4 + I_7)}{5} \times \frac{(I_5 + I_6)}{2}^{1/2}$$

Where: I_1 = Suitability Index (SI) of litter depth.

I_2 = SI of percent of ground covered by litter.

I_3 = SI of forb height.

I_4 = SI of percent forb cover.

I_5 = SI of percent grass cover.

I_6 = SI of relative shrub and tree density.

I_7 = SI of average height of grasses.

* If reproductive needs are satisifed, all other food and cover needs will also be satisfied.

The Habitat Suitability Index is X_1.