

California Wildlife Habitat Relationships System
California Department of Fish and Wildlife
California Interagency Wildlife Task Group

NORTHERN HARRIER

Circus cyaneus

Family: ACCIPITRIDAE
B114

Order: FALCONIFORMES

Class: AVES

Written by: C. Polite
Reviewed by: S. Bailey
Edited by: S. Bailey

DISTRIBUTION, ABUNDANCE, AND SEASONALITY

Occurs from annual grassland up to lodgepole pine and alpine meadow habitats, as high as 3000 m (10,000 ft). Breeds from sea level to 1700 m (0-5700 ft) in the Central Valley and Sierra Nevada, and up to 800 m (3600 ft) in northeastern California. Frequents meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands; seldom found in wooded areas. Permanent resident of the northeastern plateau and coastal areas; less common resident of the Central Valley. Widespread winter resident and migrant in suitable habitat. California population has decreased in recent decades (Grinnell and Miller 1944, Remsen 1978), but can be locally abundant where suitable habitat remains free of disturbance, especially from intensive agriculture. Breeding population much reduced, especially in southern coastal district. Destruction of wetland habitat, native grassland, and moist meadows, and burning and plowing of nesting areas during early stages of breeding cycle, are major reasons for the decline (Remsen 1978).

SPECIFIC HABITAT REQUIREMENTS

Feeding: Feeds mostly on voles and other small mammals, birds, frogs, small reptiles, crustaceans, insects, and, rarely on fish. Makes low, quartering flights 1-9 m (3-30 ft) above open ground. Dives from flight or hover; rarely perches and pounces on prey.

Cover: Uses tall grasses and forbs in wetland, or at wetland/field border, for cover; roosts on ground.

Reproduction: Nests on ground in shrubby vegetation, usually at marsh edge (Brown and Amadon 1968). Nest built of a large mound of sticks on wet areas, and a smaller cup of grasses on dry sites. Mostly nests in emergent wetland or along rivers or lakes, but may nest in grasslands, grain fields, or on sagebrush flats several miles from water.

Water: No data found on water requirements, but frequents aquatic habitats. Home range usually includes fresh water.

Pattern: Mostly found in flat, or hummocky, open areas of tall, dense grasses, moist or dry shrubs, and edges for nesting, cover, and feeding.

SPECIES LIFE HISTORY

Activity Patterns: Yearlong, diurnal activity.

Seasonal Movements/Migration: Some individuals migrate into California; others migrate through to Central America or northern South America.

Home Range: In Utah, 5 breeding home ranges averaged 429 ha (1060 ac), and varied

from 363-518 ha (896-1280 ac). In Michigan, individuals flew 1.6 to 8.8 km (1 to 5.5 mi) daily from a communal roost to foraging areas. Daily foraging areas varied from 12-16 ha (30-40 ac) to 259 ha (640 ac) (Craighead and Craighead 1956). Also in Michigan, 15 breeding home ranges averaged 405 ha (1000 ac), and varied from 98-770 ha (243-1920 ac). In Wisconsin, the breeding home range of 1 radio-tagged pair included an area 2 x 4.4 km (1.25 x 2.75 mi), or 890 ha (2200 ac) (Hamerstrom and Wilde 1973).

Territory: In Manitoba, territory extended 28 ha (96 ac) around nests (Hecht 1951). Very defensive of territory; will attack other, more formidable birds of prey, and humans during breeding season.

Reproduction: Breeds April to September, with peak activity June through July. Single-brooded; clutch averages 5 eggs, range 3-12. Female incubates while male provides food. Nestling period lasts about 53 days (Craighead and Craighead 1956). Breeding pair and juveniles may roost communally in late autumn and winter.

Niche: Competes with buteos, especially red-tailed and red-shouldered hawks, for food. Often considered a diurnal counterpart of the short-eared owl. Population may increase with some agricultural practices (e.g., grain crops), provided that cover and nesting habitat is preserved or enhanced.

Comments: Formerly called marsh hawk.

REFERENCES

- Bent, A. C. 1937. Life histories of North American birds of prey. Part 1. U.S. Natl. Mus. Bull. 167. 409pp.
- Bertrand, G. A., and J. M. Scott. 1979. Checklist of the birds of Oregon. Audubon Soc. of Corvallis. Corvallis, OR. 17pp.
- Brown, L., and D. Amadon. 1968. Eagles, hawks and falcons of the world. 2 Vols. Country Life Books, London. 945pp.
- Call, M. W. 1978. Nesting habits and survey techniques for common western raptors. U. S. Dep. Inter., Bur. Land Manage., Portland, OR. Tech. Note No. 316. 115pp.
- Craighead, J. J., and F. C. Craighead, Jr. 1956. Hawks, owls and wildlife. Stackpole Books, Harrisburg, PA. 443pp.
- Grinnell, J., and A. H. Miller. 1944. The distribution of the birds of California. Pac. Coast Avifauna No. 27. 608pp.
- Hamerstrom, F. 1969. A harrier population study. Pages 367-384 in J. J. Hickey, ed. Peregrine falcon populations: Their biology and decline. Univ. Wisconsin Press, Madison.
- Hamerstrom, F., and D. R. Wilde. 1973. Cruising range and roosts of an adult harrier. Island Bird Banding News 45:123-127.
- Harrison, C. 1978. A field guide to the nests, eggs and nestlings of north American birds. W. Collins Sons and Co., Cleveland, OH. 416pp.
- Harrison, C. J. O., ed. 1978. Bird families of the world. Harry N. Abrams, Inc., New York. 264pp.
- Hecht, W. R. 1951. Nesting of the marsh hawk at Delta, Manitoba. Wilson Bull. 63:167-176.
- Remsen, J. V., Jr. 1978. Bird species of special concern in California. Calif. Dep. Fish and Game, Sacramento. Wildl. Manage. Admin. Rep. No. 78-1. 54pp.
- Smith, D. G., and J. R. Murphy. 1973. Breeding ecology of raptors in the eastern Great Basin of Utah. Brigham Young Univ., Provo. Sci. Bull. Biol. Ser. 18, No. 3. 76pp.
- Urdvady, M. D. F. 1977. The Audubon Society field guide to North American birds: western region. A. Knopf, New York. 855pp.