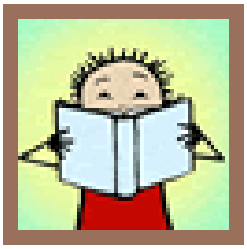
BIOLOGY, LEGAL STATUS, CONTROL MATERIALS, AND DIRECTIONS FOR USE

House Sparrow (English Sparrow)

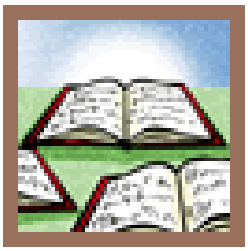
Family: Ploceidae



Introduction: The house sparrow (*Passer domesticus*) occurs naturally in most of Europe and much of Asia. Noisy and gregarious, it has followed humans all over the world and has either been intentionally or accidentally introduced. It is now the most widely distributed wild bird on the planet. Ironically, they were introduced independently in the U.S. as a means of pest control. Today the house sparrow is abundant in urban and agricultural habitats.

Identification: The house sparrow is a small, stocky songbird. It has short legs, and a thick bill. The male has a black throat, white cheeks, a chestnut mantle around a gray crown, and chestnut-colored feathers on the upper wing. Size is 6 inches. Females have a plain gray breast, a distinct, buffy eye stripe, and a streaked back. The house sparrow call is a distinctive series of slightly metallic "cheep, chirrup." Further information including audio is available at:

Cornell Lab of Ornithology



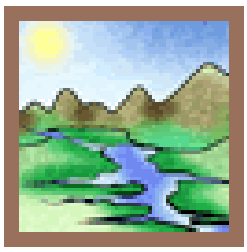
Legal Status: The California Fish and Game Code defines house sparrows as a nongame bird that may be taken and possessed by any person at any time (CFGC 3801). There are no federal restrictions on taking house sparrows. State law may vary, however, regarding house sparrow protection. Check with state or local governments when outside of California before lethally removing house sparrows.

Damage: Damage from house sparrows can be quite varied. For example, house sparrows will consume grain, especially sorghums, near ranch buildings. They also consume livestock feed, particularly at poultry production facilities. In addition to grain, house sparrows will consume sprouting vegetables, flower crops, and newly seeded lawns; they will disbud fruit trees and ornamentals; and they will occasionally peck ripened fruit.

In urban areas, the noise and bird droppings associated with roosting and nesting sites are often problematic. The house sparrow is also a substantial disease concern, capable of transmitting Newcastle disease, avian tuberculosis, avian chlamydiosis, Eastern equine encephalitis, pullorum, canary pox, salmonellosis, paratyphoid, and vibriosis among others. They also harbor numerous helminth, fungal, and protozoan parasites (such as acariasis and toxoplasmosis), as well as chicken louse and bird louse. Further disease information is listed in the Wildlife Chapter or at www.cdc.gov.

Range: The house sparrow is found throughout California except in higher elevation montane areas. This species is non-migratory.

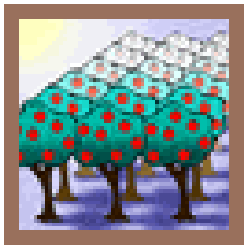
House Sparrow



Habitat: House sparrows are most frequently found in cities, towns, and agricultural areas. They are particularly comfortable around human dwellings and establishments.

Biology: Nest construction begins as early as February with both sexes participating in the activity. Nests are constructed of grass, straw, and debris and may be located almost anywhere. Females lay 3 to 7 eggs (average is around 5), and 2 or 3 broods are raised each year. The same nest has been occupied by up to 4 different females in a season, leading to higher estimates of the number of broods raised than is probably the case. The incubation period is 11 to 12 days, and young sparrows fledge at 10 to 14 days. Soon after the young leave the nest, they gather in small flocks. As the summer advances, the juveniles are joined by adults until the flock may number several hundred.

The house sparrow is primarily a grain eater. An adult bird eats about 6 grams of dry grain a day. Bread crumbs and other human debris substitute for grain in cities. Some weed seeds and insects are eaten, although most insects are consumed during summer when adults feed them to their young. Succulent vegetable matter including fruit, young plants, and blossoms of beans and peas are also consumed.

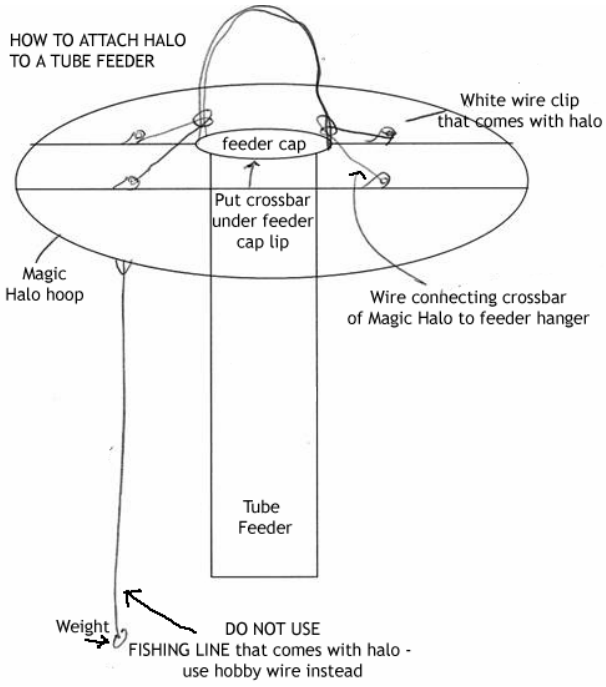


Damage Prevention and Control Methods

Exclusion: Screening with ¾ inch or smaller mesh will keep house sparrows out of poultry houses. Stringing plastic bird netting over ivy-covered walls is effective at keeping house sparrows from roosting or nesting in those areas. Removing the ivy is even more effective. Netting can also be placed anywhere sparrow exclusion is desired (e.g., ventilators, vents, air conditioners, building signs, eaves, overhangs, and ornamental designs).

As it is common for house sparrows to construct nests along ledges of overhangs between signs and buildings, make sure all signage on sides of building lie flat as to prevent house sparrows room for nest building. In instances where signage cannot lie flat, a simple installation of boards, Plexiglas, or slanted metal at a >45° angle over the ledges can prevent house sparrows from roosting. Ledges can be protected from roosting through the instillation of plastic or metal spikes. House sparrows can roost on ledges that are only 1 ½ inches wide, so spikes must be installed across the entire ledge.

In areas that require human entry (such as warehouse or barn doorways), effective exclusion of house sparrows can be accomplished by hanging a flexible wall of 4 to 6 inch plastic strips in front of the opening. Humans can easily pass through such barriers with almost no impediment, yet house sparrows will find such strips impossible to pass through.



House sparrows may be discouraged from bird feeders by installing vertical monofilament lines at 2 foot intervals around the feeders. Studies have reported that many other species of birds are not affected by this approach. The Magic Halo® is an example of such a design and is apparently an effective barrier against house sparrows using bird feeders.

Habitat modification: House sparrows can be deterred from nesting in an area by destroying nests when built. However, for nest removal to be successful, removal efforts will need to be continually repeated throughout the breeding season as house sparrows will try to rebuild destroyed nests. Total removal of vegetation, such as shrubs and trees is an effective but extreme measure. In rural areas, removal of hedgerows adjacent to crop fields can reduce attractiveness to house sparrows but eliminates habitat for other desirable wildlife species as well.

In urban areas, removal of dead fronds from palm trees and ivy from walls will reduce roosting sites. When using bird feeders, it is important to eliminate any spilled grain to reduce the attractiveness of the feeder to house sparrows. This is particularly effective at deterring use by house sparrows when combined with exclusionary approaches (see previous section on exclusion).

Frightening devices: The house sparrow's range of hearing is reported between 675-11,500 Hz meaning ultrasonic devices are ineffective. Fireworks, blank shots, shell crackers, and other noise making devices, if permitted by local regulations and persistently carried out, will eventually dislodge birds from an evening tree roost. These devices are usually ineffective where they are also nesting. Flags, foil strips, and dangling paper are relatively useless as the birds readily adapt to them.

Shooting: Shooting will reduce the number of birds present but is costly and rather futile as a method of crop protection. This approach is primarily used to remove small numbers from enclosed areas such as warehouses.

Fumigants: No fumigants are registered or practical for use for starlings.

Repellents: Tactile or sticky repellents applied to ledges, rafters, beams, etc., may help keep house sparrows away. However, the ability of house sparrows to cling to small projections makes this an expensive, laborious, and messy process. When using tactile repellents, do not apply directly to the building; rather, cover surfaces first with wood, plastic, or tape and apply the tactile repellent to this

surface. Tactile repellents are more practical for use in areas sheltered from wind and dirt; once they become coated in dirt, they lose their effectiveness.

Methyl anthranilate is an oil-based chemical that comes from grapes and can be an effective irritant to birds when aerosolized. It is most effective when used in closed spaces such as aircraft hangars and storage sheds. Cold foggers can be effective in enclosed spaces, and thermal foggers have been effective in open areas.

Trapping: This is probably the most widely used method to manage house sparrow populations. A wide variety of traps have been used for local control of house sparrows. Traps that are designed to catch only a few birds at a time include the double funnel trap, nest trap, and the commercially available elevator trap. Modified Australian crow traps and cotton trailers converted to traps have caught larger numbers of birds. Aviary wire of ½ inch × ½ inch mesh hardware cloth should be used for the wire covering of these traps. Chicken scratch, fine cracked corn, milo, wheat, bread crumbs, or their combinations make good baiting material and food sources for decoy and captured birds.

Mist nets are another common method for trapping sparrows. Mist netting can be effective if done properly, but correct installation of the netting is essential for it to be effective. Mist netting also requires constant vigilance and maintenance as netting often tears or comes loose, and non-target species that get caught in the netting must be immediately removed. Mist netting is most commonly used inside large warehouses and big-box stores where other removal techniques are less feasible. If used outside, federal permits are required.

Toxicants: Avitrol® (4-aminopyridine) is a restricted-use pesticide designed to frighten birds away from an area. Several formulations are legal for use in California. When birds consume the grain or pellets, they behave erratically and sound alarm calls that frighten other birds in the flock away from the treated area. The birds that consume the bait generally die. Avitrol® is primarily used around poultry barns, in feedlots, and staging areas. House sparrows will exhibit bait shyness with Avitrol®; prebaiting for several days before application of the pesticide will increase bait acceptance. All leftover bait and house sparrow carcasses should be picked up and disposed of after treatments are concluded.

REFERENCES AND ADDITIONAL READING

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**Adapted from several previous editions authored by D.O. Clark, J.P. Clark, and T.P. Salmon, among others.