WEC260

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Florida's Introduced Birds: European House Sparrow *(Passer domesticus)*[1]

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Many non-native birds have been introduced in Florida—perhaps as many as 200 species! Of these, at least 14 introduced species are considered established, according to various authorities, and some are now considered invasive and could have serious impacts in Florida. This fact sheet introduces the European House Sparrow, and is one of a series of fact sheets about Florida's established non-native birds and their impacts on our native ecosystems, economy, and the quality of life of Floridians. For more information on Florida's introduced birds, how they got here, and the problems they cause, read "Florida's Introduced Birds: An Overview," http://edis.ifas.ufl.edu/UW297, and the other fact sheets in this series, http://edis.ifas.ufl.edu/topic_series_floridas_introduced_birds.

Species Description

The House Sparrow (*Passer domesticus*) is a member of the Old World sparrow family (Passeridae) of small, seed-eating birds, many of which nest on buildings in urban areas. Adult House Sparrows are small birds; 6–7 inches (15–17 cm) long with a 9-inch (23-cm) wingspan. They weigh approximately 1 oz (27–29 g). Male House Sparrows (Fig. 1) have gray bodies and brown backs streaked with black and can be easily recognized by the reddish-brown stripes above their white cheeks and by the black "bib" on their throat and upper chest. The males' beaks are yellow, except during the breeding season when they turn black. Female House Sparrows (Fig. 2) are similar in appearance, with gray-brown bodies and brown backs streaked with black. However, the female lacks the black bib and white cheeks of the male. Instead, the female has gray and brown streaks on both sides of her head above her cheeks. The song of the House Sparrow is simple, consisting of a series of single-note chirps.

Similar Species

Several of Florida's native sparrows are similar in size and appearance to House Sparrows and might easily be misidentified as House Sparrows. However, many of these native sparrows are more secretive in nature, and may be less commonly seen in urbanized areas. Introduced House Sparrows are stockier than these native sparrows, and their tails are shorter. Both male and female Song Sparrows (*Melospiza melodia*,

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Figure 1. Male House Sparrows (*Passer domesticus*) can easily be identified by their black "bib," white cheeks, and the reddish-brown stripes above and behind their eyes. Credits: Steve A. Johnson, University of Florida, 2008

Figure 2. Female House Sparrows (*Passer domesticus*) are more drab than males, but can be identified by the black streaking on their brown backs, their short, yellow bills, and the light stripes above and behind their eyes. Credits: Steve A. Johnson, University of Florida, 2008

Fig. 3), Chipping Sparrows (*Spizella passerina*, Fig. 4) and Field Sparrows (*S. pusilla*, not pictured) are similar in appearance to the female House Sparrow, but there are slight differences that can be used to tell them apart. The Song Sparrow has dark streaking on its chest. The Chipping Sparrow has a more obvious, bold dark stripe through its eyes, and the crown of the head turns rusty red during the breeding season in both sexes. The Field Sparrow has much less obvious eye stripes, and its bill and legs are pinkish.

Several other species, such as Carolina Chickadees, Carolina Wrens, and introduced House Finches may also be misidentified as House Sparrows. The Carolina Chickadee (*Poecile carolinensis*, Fig. 5) is similar in appearance to the

Figure 3. Song Sparrows (*Melospiza melodia*) are found throughout Florida, with the exception of extreme southeastern areas, and may be confused with female House Sparrows. However, House Sparrows lack dark streaks on their chests. Credits: Trisha Spears, Wikimedia Project, 2007

Figure 4. Chipping Sparrows (*Spizella passerina*, shown here) and Field Sparrows (*S. pusilla*, not shown) are found in the Florida panhandle and the northern half of the peninsula, and are occasionally seen in urbanized areas. Chipping Sparrows can be identified by the bold, dark stripes through their eyes and their rust red caps (shown here) during the breeding season. Field Sparrows have a much less distinctive eyestripe, and their bills and legs are pinkish. Credits: John D. Wilson, http://www.naturepicsonline.com, 2008

male House Sparrow. However, the slightly smaller Carolina Chickadee has a black-capped head and a smaller black bib. The Carolina Chickadee also lacks the reddish-brown coloration seen on the back and head of the House Sparrow. Also, the range of the Carolina Chickadee does not include southern Florida. The Carolina Wren (*Thryothorus ludovicianus*, Fig. 6) is similar in appearance to the female House Sparrow. The Carolina Wren is found throughout Florida but is slightly smaller and has a

much more distinct light stripe above and behind its eye, little or no black streaking on its back and underbelly, and a longer, thinner dark bill. The female House Finch (*Carpodacus mexicanus*, Fig. 7) is also similar in appearance to the female House Sparrow, but is much more heavily streaked with brown (not black), and lacks the light stripe above and behind its eye. House Finches were introduced in the central and southeastern United States, and are not native to Florida. For more information on House Finches, read "Florida's Introduced Birds: House Finch (*Carpodacus mexicanus*)," available online at http://edis.ifas.ufl.edu/UW298.

Figure 5. Carolina Chickadees (*Poecile carolinensis*) are found throughout much of the southeastern United States (except central/south Florida), and may be confused with male House Sparrows. But they can easily be identified by their black-capped heads and the lack of reddish-brown coloration on their heads and backs. Credits: Ken Thomas, Wikimedia Project, 2008

Native Range and Habitats

The House Sparrow is an Old World native with a historical range stretching from the British Isles south to northern Africa and eastward as far as Siberia and India. House Sparrows are mainly found in human-modified landscapes, such as agricultural or urbanized areas, and are rarely found in large forests, grasslands, or deserts.

Mode of Introduction

In the mid-1850s, 100 House Sparrows were released in Brooklyn, New York, in hopes of establishing familiar wildlife for European immigrants and helping to control insects. House Sparrows spread rapidly and had become established

Figure 6. Carolina Wrens (*Thryothorus ludovicianus*) are found throughout much of the eastern United States and are easily confused with female House sparrows. However, Carolina Wrens have a much more distinct light stripe above and behind their eyes and lack the black streaking on their backs. Credits: Ken Thomas, Wikimedia Project, 2008

Figure 7. House Finches (*Carpodacus mexicanus*) are found throughout the United States, and are similar in appearance to female House Sparrows. However, House Finches are more heavily streaked with brown, rather than black, and lack the light stripes above and behind their eyes. Credits: Walter Siegmund, Wikimedia Project, 2007

across the contiguous United States by the early 1900s. In the mid-1970s, House Sparrows were also intentionally introduced in San Francisco, California, and Salt Lake City, Utah.

Introduced Range and Habitats

House Sparrows are now found across the contiguous United States (Fig. 8), much of Canada, Mexico, and Central America. They have also been introduced in Hawaii, the Caribbean, South America, South Africa, New Zealand, and Australia. Throughout much of their introduced range, House

Sparrows are only found near urbanized areas or human dwellings. This is especially true in extreme northern regions and in desert areas, where isolated populations are found in agricultural areas or on ranches.

Figure 8. Range of the introduced House Sparrow (*Passer domesticus*) in the contiguous United States. Credits: Monica McGarrity, University of Florida, 2008 (Data sources: Cornell Lab of Ornithology, Birds of North America online, Avian Knowledge Network)

Ecology

The diet of the House Sparrow consists mainly of plant seeds, grains, birdseed, and human food scraps, except during the breeding season when they prey heavily on insects. These small birds are commonly seen hopping along the ground foraging for food scraps around restaurants and shopping centers. House Sparrows are highly social, roosting and nesting communally, but will fiercely defend small territories around nest sites. House Sparrows begin to breed in March, and continue through August, rearing up to four broods of chicks each year. Females lay 4–6 white eggs, abundantly marked with brown spots and streaks, in nests constructed with dried vegetation. The eggs hatch within approximately two weeks, and the young leave the nest two weeks later. Roughly one week after the young leave the nest, the female can lay a new clutch of eggs. House Sparrows commonly nest under the eaves of buildings (Fig. 9), but will also use nest boxes intended for Eastern Bluebirds or Purple Martins, and may even evict resident birds.

Ecological Impacts

House Sparrows aggressively compete with native birds for food and nest sites and may reduce their nesting success. These invasive birds will use nest boxes intended for native birds and are known to evict other birds from nest sites, destroying eggs, killing nestlings, and sometimes killing incubating females. Male House Sparrows vigorously defend the area around their nests and may prevent other birds from nesting nearby. House Sparrows are also able to rapidly rebuild nests that are destroyed, an ability that gives them a competitive advantage in urban settings.

A recent study conducted by researchers in Mexico found that introduced House Sparrows have significant effects on native bird communities in urban and agricultural areas. They compared bird abundance (number of birds) and species richness (number of bird species) between areas invaded by House Sparrows and areas where they were not found. Not surprisingly, the researchers found that invasive House Sparrows affect the natural dynamics of bird communities, becoming the most abundant, dominant species and replacing some native species, thus reducing the total number of species in the community. However, recent Breeding Bird Surveys (conducted by the United States Geological Survey and the Canadian Wildlife Service) suggest that House Sparrow populations in the United States are in decline, possibly due to competition from introduced House Finches.

Impacts on People and Pets

House Sparrows have become a huge nuisance to humans in urbanized areas, often dominating backyard bird feeders and taking over nest boxes installed by bird lovers hoping to attract native species. They build messy nests of dried vegetation (Fig. 9) in any available space around signs or under the eaves, gutters, and drain pipes of commercial buildings and residences. Their nests can damage insulation, cause fire hazards, or clog drain pipes and gutters. In commercial areas, their droppings often accumulate on the walls and sidewalks of businesses, creating an unsightly mess that is unappealing to patrons and difficult to remove. More importantly, bird droppings can pose a significant health hazard.

Like many birds, House Sparrows can carry a variety of *zoonoses*, diseases that can be spread to humans (often through feces), and act as *amplifying hosts*, allowing the infectious agent to multiply rapidly. Host birds, including House Sparrows, are thought to be responsible for the rapid spread of West Nile virus, a disease that has an especially high potential to spread to humans in urban areas in the South, where conditions for outbreak are ideal.

Figure 9. House Sparrows build messy nests of dried vegetation in any available space on urban structures—under eaves, above and behind gutters and drainpipes, in and around vents, and especially around signs. These nests should be prevented or removed because they can cause fire hazards and clog drains, and the droppings that accumulate under the nests can present a health hazard and cause unsightly stains. Credits: Steve A. Johnson, University of Florida, 2008

Solutions

House Sparrows, like all introduced species in Florida, are not protected by law and can be trapped and removed. Their nests and eggs can be destroyed. If nests and eggs are destroyed, House Sparrows will persistently (and rapidly) rebuild. Removing their eggs soon after they are laid, neutralizing them by vigorous shaking, freezing, or coating with vegetable oil, and then putting them back in the nest may help to slow reproduction while the sparrows continue to incubate eggs that are no longer viable. In rural areas where discharge of a firearm is permitted, House Sparrows may be shot; trapping and removal efforts in urbanized areas are usually best left to qualified professionals. If you do choose to trap and remove House Sparrows yourself, you will need to humanely euthanize the birds or take them to your local animal control agency for euthanasia. You cannot simply release the birds elsewhere, since it is illegal to release any non-native wildlife in Florida. For a thorough review of trapping and euthanasia methods for House Sparrows, visit http://www.sialis.org/traps.htm, and check out the Additional Resources listed below.

Prevention may be the best strategy for dealing with these persistent nesters. Any openings larger than 3/4 inch (such as gaps around roof vents) can be sealed with expansion foam sealant or covered with hardware cloth (Fig. 10), and "bird spikes" (available at hardware stores or online) or bird netting can be installed under eaves or in other potential nest sites to prevent nesting. Signs on commercial buildings should be installed flat against the building, and outdoor lighting fixtures may be covered by a shield of hardware cloth. When possible, nest boxes intended for native birds should be placed 100 yards from structures where House Sparrows nest, or removed if it is impossible to prevent House Sparrows from using them to reproduce successfully. Covering or plugging the opening to the nest box until late April, when many House Sparrows have already selected nest sites, can help to prevent these invasive birds from using nest boxes intended for later-nesting native species such as Eastern Bluebirds. There are also a variety of devices, such as the "sparrow spooker" or "magic halo," that have been somewhat successful at preventing House Sparrows from using nest boxes and bird feeders (for more information, visit http://www.sialis.org/hosp.htm).

Figure 10. Preventative measures should be taken to discourage House Sparrows from nesting on urban structures. Here, hardware cloth is used to cover an open vent that might be an inviting nest site. Credits: Steve A. Johnson, University of Florida, 2008

How You Can Help

You can help to alleviate the growing numbers of non-native bird species in Florida by being a responsible and educated pet owner. Never set any pet free outside! You can also help by learning more about invasive plants and animals and their impacts on Florida's natural environment, and by educating others. For more information on Florida's introduced birds and how you can help, read "Florida's Introduced Birds: An Overview," http://edis.ifas.ufl.edu/UW297, and check out the Additional Resources listed below.

Additional Resources

We recommend several different online guides, books and other publications that provide additional information on Florida's native and non-native birds.

Books and Scientific Publications

Avery, M. L., and M. P. Moulton, "Florida's non-native avifauna," Managing Vertebrate Invasive Species: Proceedings of an International Symposium (G. W. Witmer, W. C. Pitt, K. A. Fagerstone, Eds.). (Fort Collins, CO: USDA/APHIS/WS, National Wildlife Research Center, 2007).

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Online

Internet Center for Wildlife Damage Management, University of Nebraska – Lincoln, The Handbook: Prevention and Control of Wildlife Damage – House Sparrows
http://digitalcommons.unl.edu/icwdmhandbook/71/

USDA National Invasive Species Information Center (NISIC)
http://www.invasivespeciesinfo.gov/index.shtml

Florida Fish and Wildlife Conservation Commission Non-Native Wildlife
http://myfwc.com/nonnatives/index.htm - click on "Birds"

Florida Fish and Wildlife Conservation Commission Breeding Bird Atlas – House Sparrow
http://myfwc.com/bba/docs/bba_HOSP.pdf

World Conservation Union, Species Survival Group, Invasive Species Specialist Group
http://www.issg.org – click on "Global Invasive Species Database", search for species

Cornell Lab of Ornithology "All About Birds"
http://www.birds.cornell.edu/AllAboutBirds - click on "Bird Guide", search for species

United States Geological Survey, Patuxent Wildlife Research Center, Bird Identification http://www.mbr-pwrc.usgs.gov - click on "Bird Identification InfoCenter"