

<b>NAME OF SPECIES: Passer domesticus</b>	
<b>Synonyms: Fringilla domestica</b>	
<b>Common Name: English sparrow, house sparrow, domestic sparrow</b>	
<b>A. CURRENT STATUS AND DISTRIBUTION</b>	
I. In Wisconsin?	1. YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
	2. <u>Abundance</u> : This species is commonly found throughout human habituated habitats in Wisconsin. A permanent resident.
	3. <u>Geographic Range</u> : Urban and suburban areas are places commonly inhabited by House Sparrows (1, 8, 14).
	4. <u>Habitat Invaded</u> : Human altered habitat Disturbed Areas <input checked="" type="checkbox"/> Undisturbed Areas <input type="checkbox"/>
	5. <u>Historical Status and Rate of Spread in Wisconsin</u> : This species was introduced to North America from its native Europe in Brooklyn, NY in the 1851 was deliberately released in Racine as early as 1869, and by 1900, the birds had spread throughout WI (18). This bird is common and abundant in the state. The population of house sparrows peaked in the early 1900's, but has shown a decline over recent decades (1, 8, 18). WI has experienced a 2.8% annual decline 1980-2002 (19).
	6. <u>Proportion of potential range occupied</u> : This species does not migrate (1, 11). WI Breeding Bird Atlas Project detected these birds in every WI county and 75% of all quads (18).
	7. <u>Survival and Reproduction</u> : This species survives and reproduces in Wisconsin.
II. Invasive in Similar Climate Zones	1. YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> <u>Where (include trends)</u> : Urban and suburban areas are places commonly inhabited by House Sparrows (1, 8, 14). This species is found throughout the world except the poles (8).
III. Invasive in Similar Habitat Types	1. Upland <input type="checkbox"/> Wetland <input type="checkbox"/> Dune <input type="checkbox"/> Prairie <input type="checkbox"/> Aquatic <input type="checkbox"/> Forest <input type="checkbox"/> Grassland <input type="checkbox"/> Bog <input type="checkbox"/> Fen <input type="checkbox"/> Swamp <input type="checkbox"/> Marsh <input type="checkbox"/> Lake <input type="checkbox"/> Stream <input type="checkbox"/> Other: <input checked="" type="checkbox"/> Urban, suburban and agricultural areas (1, 8, 14).
IV. Habitat Affected	1. <u>Where does this invasive resided</u> : Edge species <input checked="" type="checkbox"/> Interior species <input type="checkbox"/>
	2. <u>Conservation significance of threatened habitats</u> : None
V. Native Habitat	1. <u>List countries and native habitat types</u> : Eurasia and North Africa (8). This species is found in similar habitat types in its native range. This species will stay far from uninhabited woodlands, deserts and grasslands (8). This species declined in its native range over the last 25 years (4). This is potentially due to reduction of split grained crops, increased predation by cats and the use of toxic additives in unleaded fuel (4).
VI. Legal Classification	1. <u>Listed by government entities?</u> None
	2. <u>Illegal to sell?</u> YES <input type="checkbox"/> NO <input type="checkbox"/> Notes: This species is abundant and widespread throughout the world. They are considered a nuisance animal to most people.

	There is no information on the sale of this species.
<b>B. ESTABLISHMENT POTENTIAL AND LIFE HISTORY TRAITS</b>	
I. Life History	<p>1. <u>Type of Animal</u>: Mammal <input type="checkbox"/> Bird X Reptile <input type="checkbox"/> Amphibian <input type="checkbox"/> Fish <input type="checkbox"/></p> <p>2. <u>Age of Maturity or time to self sufficiency</u>: 9 months are required to reach sexual maturity (1). The young are self sufficient 7-10 days after leaving the nest (1). Young fledge around 14 days after hatching (1, 2, 8).</p> <p>3. <u>Gestation Period</u>: Incubation lasts around 11 days but can range from 10 to 14 days (8). Incubation can last up to 16 days (1).</p> <p>4. Mating System: Polygamous <input type="checkbox"/> Polyandrous <input type="checkbox"/> Monogamous X <u>Notes</u>: This species is monogamous through the breeding season (8)</p> <p>5. Breeding/ Breeding period: Breeding takes place from February to May (8). Clutch size, ranges from 3-7 with 2-5 clutches per year (1). This species can average around 20 chicks a year (1).</p> <p>6. <u>Hybridization potential</u>: This species can hybridize with Eurasian tree sparrows (16).</p>
II. Climate	<p>1. <u>Climate restrictions</u>: none</p> <p>2. <u>Effects of potential climate change</u>: One studied showed that there has been a reduction of body mass in the house sparrow (3). This reduction of body mass "can be attributed to climate warming" (3). However, this study stated that there is no "strong signal of adapting to climate change" (3). This species is very prolific and because of this would have an easier time to adapt than other species not as prolific. European house sparrows are not in danger of extinction (5).</p>
III. Dispersal Potential	<p>1. <u>Pathways</u> - Please check all that apply:</p> <p><u>Unintentional</u>: Bird <input type="checkbox"/> Animal <input type="checkbox"/> Vehicles/Human <input type="checkbox"/> Wind <input type="checkbox"/> Water <input type="checkbox"/> Other:</p> <p><u>Intentional</u>: Ornamental X Forage/Erosion control <input type="checkbox"/> Medicine/Food: Recreational <input type="checkbox"/> Other: This species was established because it was a familiar wildlife species to European immigrants (6).</p> <p>2. <u>Distinguishing characteristics that aid in its survival and/or inhibit its control</u>: This species is very prolific.</p>
IV. Ability to go Undetected	1. HIGH <input type="checkbox"/> MEDIUM <input type="checkbox"/> LOW X
<b>C. DAMAGE POTENTIAL</b>	
I. Competitive Ability	<p>1. <u>Presence of Natural Enemies</u>: This species is predated by Cooper's hawks, merlins, snowy owls, eastern screech owls, cats, and raccoons (8). This is just some of their predators (8).</p> <p>2. <u>Competition with native species</u>: This species is abundant and aggressive (1, 2, 6,8,10,11,12,14,15). This species nests</p>

in late winter, allowing the house sparrow to acquire nesting spots before other migrates arrive (1, 6). House sparrows will destroy eggs, kill nestlings and may even kill the parents of the young (1, 6, 11, 12, 13). In large flocks this aggressive species will discourage other birds from feeding in that area (1, 6). Some species affected by house sparrows are: robins, song sparrows, bluebirds, purple martins, as well as others (6). House sparrows have been known to take over nesting sites from purple martins and bluebirds (7). The Birdhouse Network indicated that in 2003 house sparrows accounted for 43% of "competitor species" (10). A competitor species in one that will take over nesting boxes (10). One major factor to the eastern bluebird decline is competition from house sparrows and European starlings (13). Native species have suffered because of house sparrows (2, 14).

3. Rate of Spread:

-changes in relative dominance over time:

-change in acreage over time:

HIGH(1-3 yrs) X MEDIUM (4-6 yrs)  LOW (7-10 yrs)

Notes: This species went from a few individuals to 150 million individuals (1). This species is now one of the most abundant species in the 48 States (1). Recently, house sparrow populations have exhibited declines (1, 4, 8).

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II. Environmental Effects

1. Alteration of ecosystem/community composition?

YES X NO

Notes: This species can potentially impact plant communities because they feed heavily on seeds (8). Competes with and displaces some native songbirds for nest sites.

2. Alteration of ecosystem/community structure?

YES X NO

Notes: This species can potentially impact plant communities because they feed heavily on seeds (8).

3. Alteration of ecosystem/community functions and processes?

YES  NO X

Notes:

4. Exhibit Parasitism? YES  NO X

Notes: Rare in house sparrows (17).

**D. SOCIO-ECONOMIC EFFECTS**

I. Positive aspects of the species to the economy/society:

Notes: This species can reduce insect numbers during parts of the year and feeds on weed seeds (6).

II. Potential Socio-Economic Effects of Requiring Controls:

Positive:

Negative:

Notes: No negative socio-economic effects. This species considered a nuisance species for most people. This species also carries many diseases (9). Controlling this species will have positive socio-economic effects.

III. Direct and Indirect Socio-Economic Effects of the Animal :

Notes: This species can cause crop damage. Localized damage by large flocks of house sparrows can be considerable (9). This species can eat and contaminate poultry food and stored grains with droppings (9). House sparrow droppings and feathers create janitorial problems and unsanitary conditions inside and outside

	buildings and sidewalks under roosts (9). Bulky flammable nest are a potential fire hazard (9). Flock noise is an annoyance to some residents (9).
IV. Increased Costs to Sectors Caused by the Animal:	Notes: Agriculture, home and business owners.
V. Effects on Human Health:	Notes: They are a factor in disseminating diseases, internal parasites, and household pests (9).
VI. Potential Socio-Economic Effects of Restricting Use:	Positive: Could potentially lower the amount of crop damage and restrict the spread of several human diseases. Lower amount of time and money spent on sanitation issues. Negative: None
<b>E. CONTROL AND PREVENTION</b>	
I. Costs of Prevention (please be as specific as possible):	Notes: It is not feasible to try to prevent or control this species on a large scale, too many individuals (6). Instead it would be more economically feasible to find where house sparrows are competing heavily with native birds and eradicate them from those areas (6).
II. Responsiveness to Prevention Efforts:	Notes: This species has a very high reproductive potential and will re-nest if their nest is destroyed (6). A way to discourage re-nesting is to catch and remove the adult or set up more than one nesting box (6). When the house sparrow uses one nesting box, remove and addle the eggs and replace them in the nest (6,13). The female house sparrow will incubate the addled eggs, which will never hatch. This will keep the female from competing with other neighboring birds.
III. Effective Control Tactics:	Mechanical X Biological X Chemical X Times and uses: Exclusion, frightening, repellents, cultural methods, toxicants, trapping, shooting, nest destruction, and cat predation can all be effective control tactics (6).
IV. Minimum Effort:	Notes: Check nesting boxes starting in February around areas that are attractive to other bird species.
V. Costs of Control:	Notes: Minimal cost for cats or a live-trap to high cost for full blown exclusion treatments.
VI. Cost of Prevention or Control vs. Cost of Allowing Invasion to Occur:	Notes: Targeting areas where house sparrows compete with many native species would lower the cost and remove the problem. It is not cost-effective to remove every house sparrow. This would involve removing millions of birds.
VII. Non-Target Effects of Control:	Notes: Mistaken identity of eggs when addling could cause problems with native bird populations. Toxicants may affect non-target species but careful placement can minimize problems.
VIII. Efficacy of Monitoring:	Notes: Monitoring birds around the areas of control would have to be done. The BBS or the CBC would not show any affects of the control because control efforts concentrated in local areas. Walking transects and listening for birds would be a good way to monitor the population in these local areas.
IX. Legal and Landowner Issues:	Notes: None

**F. REFERENCES :**

Number	Reference
1	<a href="http://www.sialis.org/hosphistory.htm">http://www.sialis.org/hosphistory.htm</a>
2	<a href="http://www.birds.cornell.edu/AllAboutBirds/BirdGuide/House_Sparrow_dtl.html">http://www.birds.cornell.edu/AllAboutBirds/BirdGuide/House_Sparrow_dtl.html</a>
3	<a href="http://www.northeastclimateimpacts.org/pdf/miti/rodenhouse_et_al.pdf">http://www.northeastclimateimpacts.org/pdf/miti/rodenhouse_et_al.pdf</a>
4	<a href="http://www.bto.org/birdtrends2006/wcrhousp.htm">http://www.bto.org/birdtrends2006/wcrhousp.htm</a>
5	<a href="http://www.global-greenhouse-warming.com/biodiversity.html">http://www.global-greenhouse-warming.com/biodiversity.html</a>
6	<a href="http://www.columbia.edu/itc/cerc/danoff-burg/invasion_bio/inv_spp_summ/Passer_domesticus.htm">http://www.columbia.edu/itc/cerc/danoff-burg/invasion_bio/inv_spp_summ/Passer_domesticus.htm</a>
7	<a href="http://elibrary.unm.edu/sora/JFO/v049n02/p0130-p0133.pdf">http://elibrary.unm.edu/sora/JFO/v049n02/p0130-p0133.pdf</a>
8	Roof, J. 2001. "Passer domesticus" (On-line), Animal Diversity Web. Accessed July 30, 2007 at <a href="http://animaldiversity.ummz.umich.edu/site/accounts/information/Passer_domesticus.html">http://animaldiversity.ummz.umich.edu/site/accounts/information/Passer_domesticus.html</a> .
9	<a href="http://www.ces.ncsu.edu/nreos/wild/pdf/wildlife/HOUSE_SPARROWS.PDF">http://www.ces.ncsu.edu/nreos/wild/pdf/wildlife/HOUSE_SPARROWS.PDF</a>
10	<a href="http://www.news.cornell.edu/releases/April04/TBN.04.amw.html">http://www.news.cornell.edu/releases/April04/TBN.04.amw.html</a>
11	<a href="http://www.innovations-report.com/html/reports/environment_sciences/report-28319.html">http://www.innovations-report.com/html/reports/environment_sciences/report-28319.html</a>
12	<a href="http://www.news.cornell.edu/releases/July02/alien_invaders.hrs.html">http://www.news.cornell.edu/releases/July02/alien_invaders.hrs.html</a>
13	<a href="http://www.npwrc.usgs.gov/resource/birds/eastblue/ebexotic.htm">http://www.npwrc.usgs.gov/resource/birds/eastblue/ebexotic.htm</a>
14	Bull, John and John Farrand. 1994. National Audubon Society Field Guide to Birds, Eastern Region. Alfred a. Knopf Inc. New York, New York.
15	National Geographic. 1999. Field Guide to the Birds of North America 3 <sup>rd</sup> edition. National Geographic Society Washington D.C.
16	<a href="http://www.sialis.org/etsp.htm">http://www.sialis.org/etsp.htm</a>
17	<a href="http://www.princeton.edu/~wikelski/Publications/2005%20lee%20et%20al.pdf">http://www.princeton.edu/~wikelski/Publications/2005%20lee%20et%20al.pdf</a>
18	Cutright, N.J., B.H. Harriman, eds. 2006. Atlas of the Breeding Birds of WI. Wisconsin Society for Ornithology, Inc. Waukesha, WI.
19	Sauer, J. R., J.E. Hines, and J. Fallon. 2003 The North American Breeding Bird Survey, Results, and Analysis 1966-2002, Version 2003.1. U.S. Geological Service Patuxent Wildlife Research Center, Laurel, MD.

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**Reviewer(s) and date reviewed:** Dave Matheys, 8/15/07

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