

HOUSE SPARROWS (*PASSER DOMESTICUS*) IN THE AMAZON

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The seemingly ubiquitous House Sparrow (*Passer domesticus*) has recently found a permanent home in the hot and humid Brazilian Amazon. In July 1971, I observed a flourishing colony of these birds in Marabá, a town on the Tocantins Rivers, in the state of Pará. Local people remember a pair nesting in 1964; perhaps they flew down the Tocantins from Imperatriz. Exploiting an unoccupied niche, they have multiplied rapidly, but may now be checked by the number of suitable nest sites free of rats. They have caused an appreciable drop in the town's cashew crop

by eating the flowers. Another favored food is rice left out to dry.

House Sparrows may become a regular fixture of urban environments throughout the Amazon basin in the not-too-distant future. Marabá is being connected with the new Transamazon highway, a 3000-mile road across the interfluvial rain forest south of the Amazon river (see fig. 1). Within 6 years, *Passer domesticus* has spread 500 miles from Brasília to Imperatriz along the Belem-Brasília highway, another pioneer road opened in 1964. (Muller, J. Ornithol. 108:497, 1967).

First introduced to Brazil in 1906 to combat the mosquito problem in Rio, the subsequent spread of House Sparrows has always been associated with man. Taken to the south by the mayor of Bagé in 1910, they rapidly colonized this densely settled region. In the northeastern town of Recife, they were released in 1963 to feed on noxious park insects.

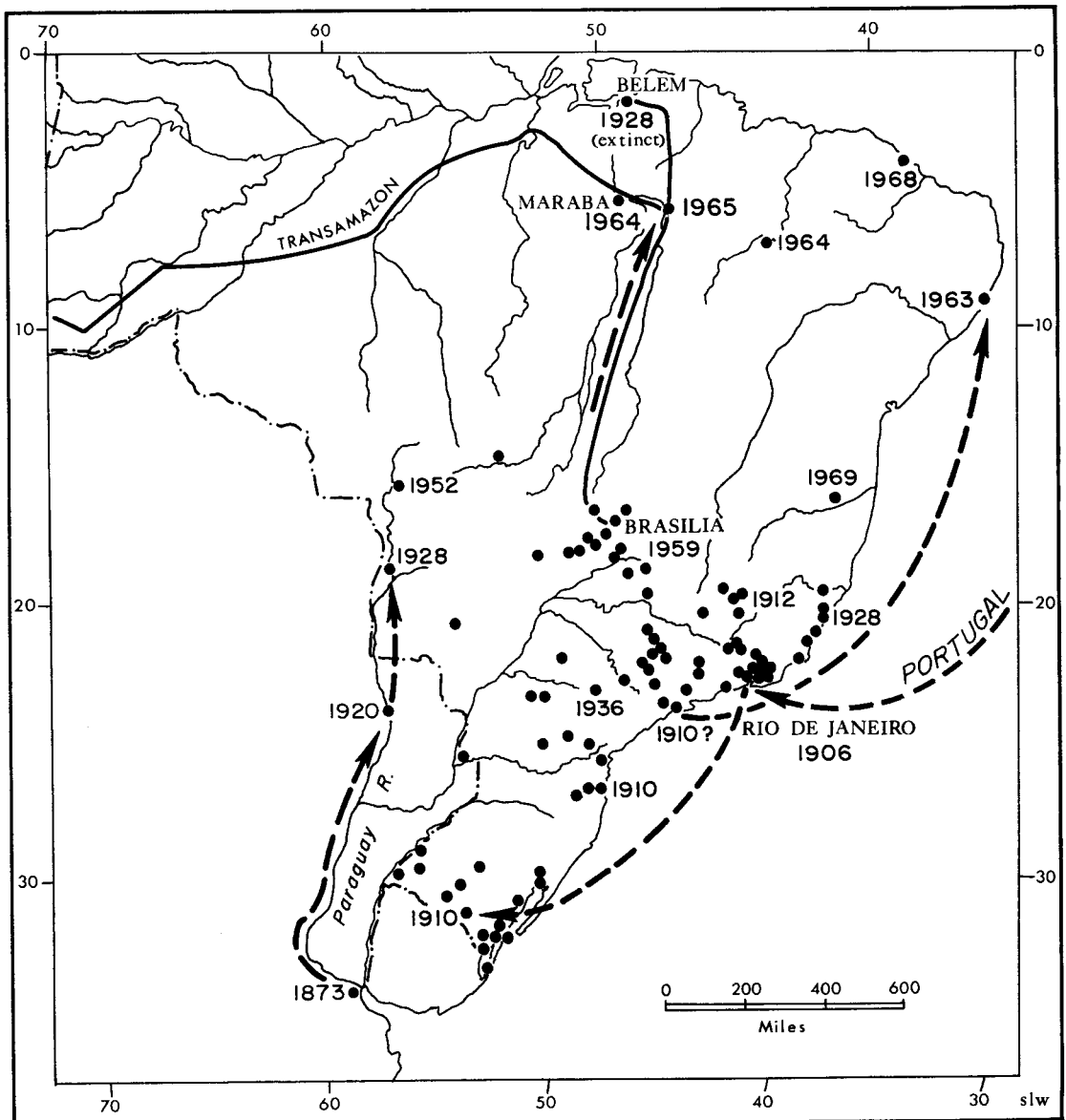


FIGURE 1. Distribution of *Passer domesticus* in Brazil.

By "hopping" north from one town to the next along the Paraguay River, they penetrated Mato Grosso (Sick, Bol. Mus. Nac. Zool. n.s. 207, 31 p., 1959). In Maraba, the House Sparrows are situated for potential colonization along the Transamazon highway.

Unfortunately, House Sparrows may also help spread Chagas' disease, an infection sometimes fatal to man. In Sao Paulo state, they have been found

carrying first instar nymphs of *Triatoma sordida* (a reduviid bug and known vector of Chagas' disease) in their feathers (Forattini et al., Rev. Saude Publ., S. Paulo, 5:193, 1971). These nymphs can be picked up easily from around nests and carried from house to house.

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FOSSIL BIRDS FROM THE LATE PLEISTOCENE INGLESIDE FAUNA, SAN PATRICIO COUNTY, TEXAS

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The large, late Pleistocene vertebrate fauna known from the freshwater pond deposits of Ingleside Pit, San Patricio County, Texas, includes a number of well-preserved avian fossils which are described below. Though the age of the fauna is late Pleistocene, determination of the precise age during which the bones were deposited is problematical and is discussed in detail by Lundelius (1972). The bones were recovered approximately one mile from the coast in San Patricio County, Texas, and the birds described in this paper could be accounted for by the same climatic and ecological conditions known in the Ingleside area of today. Specimen numbers of the birds described below refer to the collection of the Texas Memorial Museum, the University of Texas at Austin.

Podilymbus podiceps. Pied-billed Grebe. A nearly complete coracoid (30967-738-D) and a tarsometatarsus (30967-1691) are indistinguishable from similar elements of the modern Pied-billed Grebe. The Pied-billed Grebe occurs throughout much of Texas as a common migrant and may be found wintering along the coast.

Ciconia maltha. Asphalt Stork. A fragment of the distal end of a tibiotarsus (30967-1735), a fragment of a tarsometatarsus (30967-2092), and a complete tarsometatarsus (30967-426) are those of a large stork.

C. maltha, the Asphalt Stork, was common during the North American Pleistocene, and has been recorded from the Upper Pliocene and Pleistocene deposits of California, Idaho, Nebraska, Arizona, Florida, and Cuba (Brodkorb 1963; Feduccia 1967; Phillips 1968; Jehl 1966).

The three Ingleside bones are very similar to those of the modern Central and South American stork *Jabiru mycteria*, and *C. maltha*. Because of the great similarity between bones of *J. mycteria* and *C. maltha* and the great variation in the bones of modern storks, the Ingleside bones must be assigned at present to *C. maltha*. All of the large fossil stork remains from the North American Pleistocene are now assigned to a single species, *C. maltha* (Miller 1932; Howard 1941); but, because Florida specimens were originally assigned to *Jabiru* (see Brodkorb 1963), because the modern *J. mycteria* is very close in osteology to *C. maltha* (especially in postcranial elements), and because *J. mycteria* is at present unknown from the fossil record, I suggest that the problem of North American Pleistocene storks should be reopened.

Measurements of the tarsometatarsus (30967-426) are: total length, 281 mm; minimum width of shaft, 10.3 mm; greatest breadth across trochleae, 25.8 mm; breadth of trochlea for digit III, 9.2 mm. Measurements for the tibiotarsus (30967-1735) are: depth through condyles, 24.6 mm; breadth through condyles, 19.3 mm.

Branta canadensis. Canada Goose. The distal end of a humerus (30967-16) and the distal end of a tibiotarsus (30967-1063A) are those of a goose and are indistinguishable from bones of larger specimens of the modern *B. canadensis*, which is at present a common migrant throughout Texas.

Duck (Genus and species?). A fragmentary coracoid (30967-1750), which is that of a duck approximately the size of the modern Shoveler (*Spatula clypeata*), is impossible to identify to species with certainty.

Anas sp. Teal. A coracoid (30967-1693) is inseparable from that of the modern Blue-winged Teal (*A. discors*), but because there is much overlap in size of bones of modern teal species, only a tentative identification is offered.

Meleagris gallopavo. Turkey. There are six bones in the Ingleside collections which represent the modern North American Turkey. Except for a distal fragment of a tibiotarsus (30967-1063B) which is that of a female, the others are from males. They include a nearly complete coracoid (30967-1741), the proximal two-thirds of a tarsometatarsus with a spur (30967-1169), a complete tarsometatarsus with complete spur (30967-1467), and the distal ends of tibiotarsi (30967-1564, and -1139). The Turkey was a common Pleistocene bird of North America (Brodkorb 1964). Peterson (1960) records the distribution of native Turkeys in Texas as, ". . . most numerous in the Edwards Plateau and coastal prairies and ranches from cent. coast nearly to the Rio Grande."

Measurements for tarsometatarsus (30967-1467) are: total length, 161.7 mm; greatest breadth across trochleae, 23.6 mm; spur length, 17.3 mm; breadth of trochlea for digit III, 9.9 mm. Measurements for tibiotarsus (30967-1139) are: depth through condyles, 19.9 mm; breadth through condyles, 21.7 mm; minimum width of shaft, 11.7 mm.

Colinus virginianus. Bobwhite. The distal end of a tarsometatarsus (30967-1753) represents the modern Bobwhite, a common Texas resident.

Limnodromus sp.?. Dowitcher. The distal end of a tibiotarsus (30967-2091) appears to represent a dowitcher, but positive identification seems unwarranted.

Corvus brachyrhynchos. Common Crow. The distal end of a tarsometatarsus (30967-1754) is that of a Common Crow, a very common Texas species.

PALEOECOLOGY

As Lundelius (1972) has pointed out, "The Ingleside faunal assemblage has ecological implications for both the pond in which the bones accumulated and for