

House Sparrows *Passer domesticus* in Japan

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SUMMARY.—House Sparrow *Passer domesticus* was recorded for the first time in Japan in 1990 on Rishiri Island, Hokkaido. Following this, further records were reported in four (possibly five) other areas, involving a total of eight sites, until 1994, with possible earlier sightings dating from 1988. The initial sightings were of singles (though two males were later suspected at two sites) and no young were found, though hybridisation with Eurasian Tree Sparrows *P. montanus* occurred at five sites. We suggest that the House Sparrows were probably windblown from the Far Eastern Federal District of Russia by an exceptional climatic event. It seems that colonisation of Japan by House Sparrow is unlikely.

House Sparrow *Passer domesticus* has an extensive natural range that extends from coastal Western Europe and North Africa to Asia, as far east as Singapore in the south (colonised only in 1997), and the coast of the Far Eastern Federal District of Russia in the north. In the last-named region, it reached Nikolayevsk-na-Amure (53°08'N, 140°48'E) at the mouth of the Amur River in 1929 by following the Trans-Siberian railway during its construction. From there it spread to Okha (53°33'N, 143°01'E) on Sakhalin. More recently, the species has become established in many coastal towns from Magadan (59°38'N, 151°00'E) to Provideniya (64°31'N, 173°24'W) in the extreme north-east, through human introduction, and from there has spread, probably unassisted, across the Bering Strait to Alaska in the 21st century. House Sparrow, despite its recent decline in parts of Europe, is a dynamic species and the introduced populations in South America and sub-Saharan Africa are still extending their ranges.

More surprising have been the reports of its occurrence in Japan at the end of the 20th century. This paper reviews the available data and speculates on the provenance of these birds.

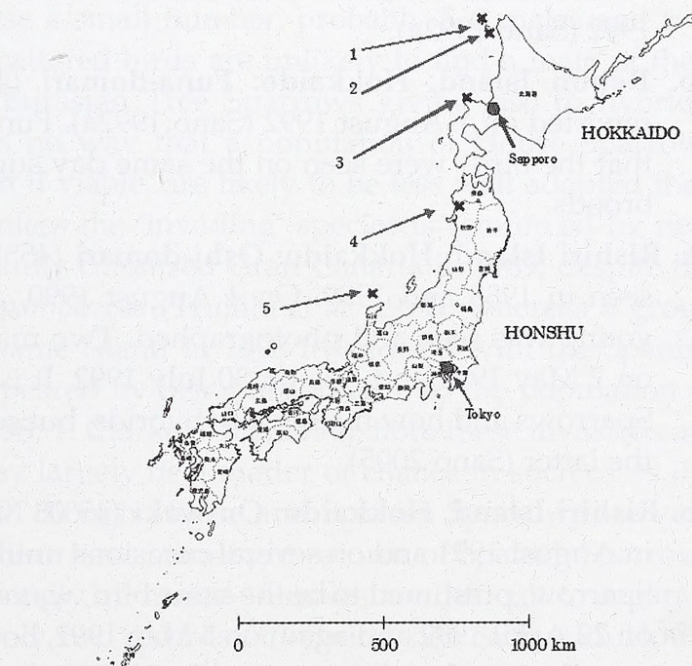


Figure 1. Map of Japan showing locations of the occurrences of House Sparrow *Passer domesticus* in the period 1990–94. 1. Rebun Island (1992), 2. Rishiri Island (1990–92), 3. Raikishi (1992), 4. Hachimori-cho (1994), 5. Hegura Island (1994).

The data

The first record of a House Sparrow in Japan was a male at Oshi-domari on Rishiri Island, off the north-west coast of Hokkaido, on 4 August 1990 (Sano 1990). This record was published in the press (*Hokkaido Shinbun* 30 May 1992), creating a wave of interest

that produced several further records, both from M. Sano, who has been studying the species for many years, and other birdwatchers and members of the public. Eurasian Tree Sparrow *Passer montanus* is common in Japan and, moreover, through appearing in many paintings and folk tales, is extremely well known. Because of its familiarity in Japan, the 'strange' sparrows that were reported before the sighting by Sano were unlikely to be that species and are more likely to have been the unfamiliar House Sparrow. The initial report was followed by records at seven other locations, with photographic evidence available from four of these: Oshi-domari (M. Sano), Oniwaki (S. Murikama), Raikishi (Ms R. Satō) and Hegura Island (M. Arai & Y. Watanabe). These sightings have involved both sexes, though not in the same location, and hybrids. Hybrids between House and Eurasian Tree Sparrows are not uncommon. Seventy-three records in Europe were analysed by Cordero & Summers-Smith (1993); the result was consistent with the 'mate restriction hypothesis'; that is when one (or both) of the species is rare, independent of the sex of that individual, hybridisation is likely to occur. This was evidently the situation with the House Sparrows that arrived in Japan.

The general areas of occurrence are shown in Fig. 1. The precise locations on Rebun Island (2) and Rishiri Island (3) cannot be shown on the scale of the map, but the sightings are sufficiently far apart to suggest that they probably involved separate individuals of this highly sedentary species.

- 1a. **Rebun Island, Hokkaido: Kafuka** (45°17'N, 141°02'E). A 'strange' sparrow was seen at Kafuka in the south of the island in 1989–91. A hybrid was reported there on 1 August 1992 (Sano 1992a).
- 1b. **Rebun Island, Hokkaido: Funa-domari** (45°26'N, 141°02'E). Three hybrids were reported on 1 August 1992 (Sano 1992a). Funa-domari is 10 km from Kafuka. The fact that the birds were seen on the same day suggests that these records refer to separate broods.
- 2a. **Rishiri Island, Hokkaido: Oshi-domari** (45°14'N, 141°13'E). A 'strange' sparrow was seen in 1988 and 1989. On 4 August 1990, a male House Sparrow with two hybrid young was seen and photographed. Two males were seen on 9 November 1991, four on 2 May 1992 and five on 30 July 1992. It is unclear how many of these were House Sparrows and how many were hybrids, but some that were photographed were clearly the latter (Sano 2005).
- 2b. **Rishiri Island, Hokkaido: Oniwaki** (45°08'N, 141°18'E). An adult male was first seen in August 1991 and on several occasions until 9 November 1991. In 1992, a male House Sparrow, presumed to be the same bird, was seen mating with a Eurasian Tree Sparrow on 22 April 1992 and again on 4 May 1992, both incidents being photographed. The last record was a female, presumably a hybrid, on 30 July 1992 (Sano 1992a,b).
- 2c. **Rishiri Island, Hokkaido: Kutsu-gata** (45°11'N, 141°07'E). An adult male was seen by a local observer on 30 July 1992, the identification being confirmed later by Sano (1992a). Oniwaki is 15 km from Oshi-domari, Kutsu-gata 11 km from Oshi-domari and 16 km from Oniwaki. These records are considered to refer to different individuals.
3. **Raikishi, Hokkaido** (43°19'N, 140°24'E). An adult male House Sparrow was photographed (by Ms R. Satō) in 1992—possibly two male House Sparrows were present. A male House Sparrow was seen mating with a Eurasian Tree Sparrow at the end of May 1992; hybrid young were seen in September 1992 (Sano 1992a).
4. **Hachimori-cho, Honshu** (40°20'N, 140°20'E). A female House Sparrow was reported in August–September 1992 (Sano 2005).

5. **Hegura Island, Honshu** (37°52'N, 136°56'E). A female House Sparrow seen and photographed on 22 May 1994 was in the same area in June (Sano 2005). There was no possibility of breeding as there are no Eurasian Tree Sparrows on Hegura.

All of these locations are shown in Fig. 1. All are on the west coast of Japan and extend over 900 km. In addition to the above, there is an unconfirmed record for Niigata Prefecture for 1994 (Yomiuri Shinbun 9 June 1994). Niigata Prefecture is due east of Hegura.

Discussion

Sano (1992a) originally suspected that the birds had spread from Sakhalin—Rishiri Island is only c.40 km from the southern tip of Sakhalin—but this hypothesis was abandoned when he found that, although House Sparrows are still in Okha, there had been no spread to the south. An alternative that he suggested was that the birds had flown from the Far Eastern Federal District of Russia assisted by the autumn monsoon; a distance of c.250 km to north Hokkaido and c.350 to the Shakotan Peninsula, where Raikishi is located. Another possibility is that the birds could have hitched lifts on ships from the Far Eastern Federal District—there is considerable maritime traffic between there and Japan. With the records of House Sparrows (as distinct from hybrids) restricted to a limited period, within the lifespan of the species in the wild, this seems unlikely. If these birds had come aboard ships, why has there been a complete absence of records outside this period? It seems more probable that there was an extraordinary climatic event that caught up some House Sparrows from Russia and of these a small number, probably 5–8 males and two females, 'rained' down on Japan. Such scattered birds are unlikely to find a mate of their own species and can only breed with Eurasian Tree Sparrows giving rise to hybrids, as was observed. Consequently, there is no way that a population of House Sparrows would become established. Hybrids, even if viable, are likely to be less well adapted than the parent species and will disappear unless the 'invading' species is reinforced by new arrivals. Eurasian Tree Sparrows successfully colonised Gran Canaria in 1989, despite the presence of Spanish Sparrows *Passer hispaniolensis* (Trujillo *et al.* 1991), whereas a group of House Sparrows that arrived on the same island in 1998 hybridised with the Spanish Sparrows and traces of them soon disappeared by being absorbed into the population of the latter through hybridisation (Anon 1998; T. Clarke *in litt.* 1999). Both these invasions are thought to have been ship-assisted. It may largely be a matter of chance in such cases if a breeding population becomes established, though House and Spanish Sparrows are very closely related and likely to interbreed. There have been eight records of Spanish Sparrows in the UK in the last 100 years (unsurprisingly all males—females are difficult to separate in the field from House Sparrows), but only two records of hybrids, one each with House Sparrow and Tree Sparrow (Summers-Smith 2007). It seems most likely that these involved female Spanish Sparrows that were not detected.

Conclusion

It seems most probable that the Japanese records involved a freak event, or series of freak events, and that colonisation of Japan by House Sparrows is unlikely to occur in the near future.

Acknowledgements

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the presence in Japan of House Sparrows in the early 1990s. We are grateful to M. A. Brazil, R. Kurosawa and D. T. Parkin, who reviewed the original manuscript, and G. M. Kirwan, for their constructive comments.

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