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Valchuk O.P., Maslovsky K.S., Akulinkin S.F. and T.A. Atrokhova (2014) Expected find of the first nested colony of Common starling *Sturnus vulgaris* in Far East region: Northeast Sakhalin, township Nogliki, summer of 2014 // *Far East. J. Orn.* 4: 57–62.

SUMMARY

Increased encounters with Common starling *Sturnus vulgaris* far to the east of its known breeding range over the last decade have finally resulted in the first confirmed evidence of breeding in the Russian Far East. Disparate clusters of no less than 6 breeding pairs were discovered in the village of Nogliki, in northeastern Sakhalin Island, a distance of approximately 2,000 km from the edge of the species' primary range.

This paper presents compelling, direct evidence of nesting by Common starlings in Nogliki and indirect evidence of breeding even further north (in the city of Okha). We describe some of the features of nesting and post-nesting birds in the area. These observations allow us to estimate when successful expansion into the region began (i.e., the early 21st Century) and describe the associated factors that facilitated this process. Such factors include habitat at suitable latitudes and the absence of other starling species already occupying that niche.

The referred figures and tables are in the original article in Russian at pages 57—62

During the field research in the south of the MagThe Siberian form of the Common starling (*Sturnus vulgaris poltaratskyi*) is one of the five subspecies of this species that occurs in Russia (Koblik et al. 2006). It is distributed from the Ural Mountains east to the Lena River valley, inhabiting the southern and middle parts of the western half of Siberia, the Tuvinskaya Autonomous Region, and the northwestern portion of Mongolia (Demytyev & Gladkov, 1954; Koblik et al., 2006). The borders of this subspecies' breeding range are poorly understood, but it is thought that these birds breed as far east as southern Lake Baikal and the lower Selenga River, where nesting was detected even in Pallas' day (Demytyev & Gladkov, 1954). The possibility of Common starlings nesting in the Russian Far East has been considered inevitable by specialists in recent years; the only question was where and when the first breeding would be confirmed. Regular encounters with these starlings (including large groups) over a fairly vast area well to the east of its known breeding range have suggested the presence of concentrated

nesting and not just a few scattered nests.

Analysis of the starling distributions recorded in the Russian Far East show that their numbers are markedly different in the southeastern, southern, southwestern, and northern regions. In the southeast, there were a one encounter in Primorskii Krai in the 1970s at Kedrovaya Pad Reserve (Glushchenko & Shibnev, 1977) in addition to a number of recent findings over the past fifteen years. A single Common starling fed among a flock of White-cheeked starlings (*S. sineraceus*) at Lake Mramornoye, south of the village Plastun, on 17 May, 2005 (Sotnikov & Akulinkin, 2007). Later, a single bird and a pair were observed in the vicinity of the city of Ussuriisk in April 2006 (Glushchenko et al., 2006). All birds seen in these encounters were classified as "rare vagrants." There have only been three published records in Khabarovskii Krai, just north of Primorskii Krai (Babenko, 2000; Pronkevich, 2001; Pronkevich et al., 2011). Pronkevich et al. (2011) reported an encounter with a flock of 15 individuals on 24 June 2009 in the city of Nikolayevsk-na-Amur, including adults bringing food to juveniles born that year. They consequently concluded there was a high probability that the species nested nearby.

In contrast to the mere handful of records in Primorskii and Khabarovskii Krai, there have been several hundred encounters in the lower Upper Pri-Amur since the 1980s (Dugintsov, 2014). According to

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that author, ever since the first (unpublished) record of a Common starling by S.M. Smirenskii thirty years ago, a clearly-defined seasonal migration route has formed in the Upper Pri-Amur River region. In spring, birds fly in a westerly and northwesterly direction, in the autumn they fly to the south and southwest. Dugintsov (2014) also suggested that Common starlings are not just adopting new migration routes; they are expanding their nesting range as well.

There has been a noticeable expansion of this species into the northeastern corner of the Russian Far East in recent years. The Common starling was first officially detected in the Kamchatskii Krai in the second half of May 2011, in the vicinity of the village Milkovo in central Kamchatka, where a single bird was seen (Rozhdestvenskii & Kuryakova, 2012). In June of the same year I.V. Dorogoi (2011) observed a single starling on the outskirts of the village Ola, Magadanskaya Oblast (59°34' N, 151°18' E), which remains that northern-most observation of this species anywhere they are found in the Russian Far East. In 2012, three Common starlings were observed from 11-22 May in the same region of central Kamchatka (Rozhdestvenskii & Kuryakova, 2012). A wealth of discoveries have accumulated on Sakhalin Island, all of which were made in the north of the island by various research groups. A female starling was observed (and subsequently collected) 12-19 July, 1988, on the shores of Urkt Bay, 5 km from the town of Okha (Nechaev 1991). Another individual was seen on 12 May, 1992, along the coast of Piltun Bay (Nechaev 2005). Twelve Common starlings were seen feeding at the Nogliki village dump on 20 July, 2011, and a single bird was seen in that village on 20 June, 2012 (Tiunov & Blokhin, 2012). A single male was observed in the larch/dwarf pine forest on the northern spit of Chaivo Bay on 11 June, 2005 and, lastly, a group of three starlings was observed at the newly-constructed residential area of Nogliki on 08 June, 2013 (Sotnikov et al., 2013).

We thus arrive at the event that precipitated this manuscript. A Common starling was observed carrying food in its beak on 11 June on Gagarin Street, in a multi-story residential section of Nogliki. The bird perched on a power line. After a brief period of observation a nest was revealed in a crack in the siding of a three-story building near where a gas

line was attached to the structure. The opening was rectangular and about 15 cm across, and located just above the level of the first floor windows. The adult birds brought food items with regularity; earthworms in particular, from the nearby, recently-tilled garden. An examination of the chicks showed they were already quite old; no less than two weeks, and fully feathered. They called loudly and protruded out the cavity when their parents approached (see Figs. 1, 2).

Nogliki (51°49' N, 143°07' E) is the administrative county seat. It is located in northeastern Sakhalin Island on the right bank of the Tym River, 9 km from the river's mouth at Nyiskii Bay in the Sea of Okhotsk. With more than 10,000 residents, it is the second-largest human settlement in northern Sakhalin. Given the high level of seismic activity in the region, the village is dominated by low-rise buildings. The village is a transport hub and as such houses a number of large and small trucking companies, motor depots, etc. There are several transformer substations and four water towers. The village dump is located along the road between Nogliki and the semi-abandoned settlement of Katangli, which is dominated by dilapidated buildings, two-story wooden apartment buildings, and a few private homes. Thus, it is clear that the village of Nogliki and its environs offer an ideal location for synanthropic species to thrive. There are many sheltered locations, niches, and cavities in wooden and metal structures for starlings to choose from.

The day following the discovery of this nest we attempted to determine the scale of this phenomenon—was it an isolated event or were there more nests? We began a survey starting where three starlings had been seen the previous year, birds that had not exhibited nesting behavior (Sotnikov et al., 2013). Conversations with a local resident revealed that starlings had been present for some years, and he revealed a cavity in a power line pole where starlings had nested the previous season. This individual also suggested that we visit the village dump, where he stated dozens of starlings gathered in spring. We detected a Common starling within minutes of initiating our survey in the area, when a single individual flew across the highway from the forest edge towards a residential area. We found its nest in a 20 m-tall water tower, in a crevasse between two

poorly-fit sheets of iron. In fact, there were three pairs of starlings actively bringing food to their nests; two nests were located in the space between plates and a third in a cable attachment casing (see Figs. 3-5). We found another starling carrying food about 200 m from the tower, near a transformer substation. Later that day we made an excursion to the Nogliki village dump, where we observed 5 starlings feeding along the road, and at least 5 more birds sitting on wires or flying among piles of rubbish. They did not exhibit nesting behavior; rather they stayed in groups, gathered food, and consumed it on the spot. An employee of the dump confirmed that there are typically many more starlings there in early spring. He estimated at least a hundred. On 14 June, we examined another area of Nogliki, this time near the railway station, where we encountered a pair of starlings carrying food. They flew into an industrial complex surrounded by a formidable fence so we could not follow.

Thus, on only three brief excursions on 11, 12, and 14 June in the village Nogliki, we found 6 breeding pairs of Common starlings, which were already feeding large chicks. Feeding continued at the first nest we discovered until 16 June. On this day we observed the parents sitting just out of reach from the nest with food, calling and jumping around, trying to entice the chicks to fly. It was apparently this or the following day that they fledged as a visit on 18 June found neither the chicks nor the adults. The chicks had likely hatched in the latter half of May, as this was when the residents of the nearby apartment noticed starlings flying there with food (mostly earthworms). By 14 June there was only one nest still active there; the chicks from the other two had fledged. We counted 9 individual starlings sitting on power lines, including both adults and juveniles. Fledglings were also observed in willow trees on the edge of an industrial site, where they were fed by adult birds. The young birds were nearly the size of their parents, but differed in that their plumage was brown.

Assuming that this species might have colonized other settlements of northern Sakhalin to date, we took a trip to the village of Okha on 01 July, 2014, about 230 km north of Nogliki. Okha is the administrative center of Okha County and is located near Urkt Bay. It is the largest human settlement in northern Sakhalin with a population of about 22,000 people, who largely live

in city-style apartment buildings. Like Nogliki, there is also a section with private homes and a commercial zone. The area of the city is about 20 km². We found starlings there at the dump—at least 50 individuals—many of which were juveniles actively begging food from their parents (see Fig. 3). The birds did not allow human approach closer than 10-15 m, and occasionally flew in a flock of up to 30 individuals flying around the perimeter of the landfill. They also visited the adjacent sedge-sphagnum bog with larch/dwarf pine forests on the dump's periphery.

The presence of Common starling flocks with dependent juveniles is not definitive proof of local nesting by this species, as early post-breeding migrations are a known attribute of species biology. However, on 13 July at the Nogliki village dump we also observed a total of about 50 adult and juvenile Common starlings. The birds flushed when a large truck drove to the dump to unload garbage. The flock made a circle, then divided into two groups and settled again on the ground out of sight. The exact percentage of juvenile and adult birds could not be determined. Three birds from this flock perched on a fence; one was a juvenile and two were adults.

We therefore propose that young birds remain in the general area of their birth for at least a month. This suggests that the birds we observed in Okha in summer 2014 were also from a local colony with synchronous timing of nesting. Perhaps the congregations we saw at both dumps (on 01 July in Okha and 14 July in Nogliki) were local birds from various human settlements that made short-distance migrations to the area in search of food. This also lends support to Pronkevich et al.'s (2011) conclusion that the mixed-age flock they observed in the city of Nikolayevsk-na-Amur were from a local population.

There are two human settlements between Nogliki and Okha—Val and Tungor—where one might expect to find nesting starlings. The village of Val, which is located 60 km north of Nogliki, has been visited by us regularly in the breeding season since 2004. However, not a single starling has been recorded. The village of Tungor has not been examined. However, a single adult bird was encountered on 03 July, 2014 in the non-breeding habitat of larch/dwarf pine forest on the northern spit of Chaivo Bay exactly halfway between the settlements of Nogliki and Okha, and 35 km from

the village of Val. Interestingly, the location was the same place a Common starling was observed in 2005 (Sotnikov et al., 2013).

Analysis of the known distribution of Common starlings in the east and northeast of the Russian Far East region does not resolve questions of where the colonization originated from, or how it links migrationally to starlings observed in the Amurskaya Oblast (Dugintsov, 2014), which that author believes has a westerly tendency.

It is possible that Common starlings have colonized the north specifically because there are practically no White-cheeked starlings in the region. We never once observed this latter species on the northeastern coast of Sakhalin for the entire period of our research (2000 - present time). At one point, according to Nechaev (1991), there was a low-density White-cheeked starling nesting presence of the southern and central parts of the island, and vagrants were observed in northeastern Sakhalin as far north as the village Val and as northwest as the village Pogiba. Thus, at present the Common starling has no competition for nest and forage sites in northern Sakhalin, which gives it the opportunity to gradually fill this voided ecological niche in the anthropogenic landscape.

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