

## Redstart and Pied Flycatcher nesting in the same box

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*Received 3 November 1992, accepted 3 December 1992*

### Introduction

In 1991, the Redstart *Phoenicurus phoenicurus* and the Pied Flycatcher *Ficedula hypoleuca* nested in the same nest-box in Skibotn, northern Norway (69°20'N, 20°20'E; for details of the area, see Järvinen 1993). The nest-box (32 mm entrance hole) was situated in a pine forest and there were several similar empty boxes available nearby.

### Observations

I visited the nest six times. On 8 June the nest was half-made. On 15 June the nest contained 5 Redstart eggs and the Redstart parents were at the nest-box. One week later there were 7 Redstart eggs and 4 Pied Flycatcher eggs in the same nest cup; both the Redstart and the Pied Flycatcher females were sitting in the nest side by side. On 6 July there were 7 Redstart nestlings (c. 6 days old), 1 Pied Flycatcher egg in the nest and 1 dead 3–4 days old Pied Flycatcher nestling on the edge of the nest cup. Both the Redstart and the Pied Flycatcher parents gave urgent warning calls, but soon started to feed the young peacefully. The Pied Flycatcher was the most active feeder. Once the Redstart male and the Pied Flycatcher female stayed together in the box for a couple of minutes.

On 13 July the 7 Redstart nestlings were about to leave the nest (c. 13 days old). I watched the

nest for one hour (10.00–11.00 Finnish summer time). The four birds fed the nestlings in the box 32 times without any interspecific conflicts: the Redstart female brought food 13 times, the Pied Flycatcher female 9 times, the Redstart male 5 times and the Pied Flycatcher male 5 times. Once the Redstart female and the Pied Flycatcher male were inside the box simultaneously. On 31 July the nest contained only 1 Pied Flycatcher egg. The Redstart nestlings had probably fledged successfully.

### Discussion

I have studied the breeding biology of box-nesting passerines in Skibotn during six years (100 nest-boxes in 1987–92). This was the first time a Redstart bred in the boxes. I have not found Redstart nests in natural cavities either, and have heard only one singing male in the area. In contrast, the Pied Flycatcher is a very common breeder: in 1987–92 about 50 pairs bred in the boxes each year.

It is difficult to see why the Pied Flycatcher started to lay eggs in a box already occupied by the Redstart, especially since there was no lack of suitable empty boxes. Sometimes the Pied Flycatcher builds its nest in an occupied box and covers the eggs of the “host” species with nest material (Järvinen 1977). The “host” may abandon its nest, if the Pied Flycatcher starts nest-

building in the early egg-laying phase of the host species. In the present case, the Pied Flycatcher probably tried to take over the Redstart nest at the end of the Redstart's laying period. Apparently she did not have enough time to build her nest on the Redstart eggs before the Redstart started to sit on them.

It is also difficult to see why the Redstart parents allowed the Pied Flycatcher female to enter their nest-box. Although I saw no inter-specific conflicts, there may have been fights at the time the Redstart had finished her clutch.

The age of the dead Pied Flycatcher nestlings suggests that the first Pied Flycatcher egg was laid on 16 June, at the time when the Redstart female had laid her sixth egg and had not yet started to incubate. The Redstart was incubating when the two last Pied Flycatcher eggs were laid, and after that the females incubated side by side. The initiation dates of these two clutches were near the average (12 June) of the 58 Pied Flycatcher clutches in Skibotn in 1991.

All the seven Redstart eggs hatched and all the hatchlings fledged. Of the four Pied Flycatcher eggs, three apparently hatched, but the young died at the age of 3–4 days (the Pied Flycatcher removes small dead nestlings from the nest, but not unhatched eggs, my own obs.).

The Redstart female completed her clutch (17 June) before the Pied Flycatcher female (about 19 June). The incubation period of the Redstart is about one day shorter than that of the Pied Flycatcher (Järvinen 1990). Since the eggs of the two species were in the same nest cup, they started to develop at about the same time. However, the younger Pied Flycatcher hatchlings probably could not compete successfully for the food brought by the four parents and they soon died.

After their own nestlings had died, the Pied Flycatchers continued to feed the Redstart nestlings and "helped" to raise the brood. The Pied Flycatchers probably could not tell the Redstart nestlings from their own nestlings and had no reason to abandon the nest. According to the one-hour observation period, the Pied Flycatcher parents fed the nestlings almost as frequently as the Redstart parents, even at the end of the nestling period. The females seemed to play a more active role in feeding. The observed total number of feeds/hour (32) was more than that reported

for over 10 days old Redstart nestlings between 10.00 and 11.00 in the nearby Kilpisjärvi area (69°03'N, 20°50'E; Hannila & Järvinen 1987).

It is known that two females of the same species may lay eggs in the same nest and incubate simultaneously (for the Pied Flycatcher, see von Haartman 1969:124). However, I do not know of any previous observations of four parents of two only distantly related species nesting in the same nest and raising the young together.

## Selostus: Leppälintu ja kirjosiippo pesivät samassa pöntössä

Vuonna 1991 leppälintu ja kirjosiippo pesivät samassa pöntössä Skibotnissa Pohjois-Norjassa. Pönttö (32 mm:n lentoaukko) sijaitsi männikössä, jossa oli tarjolla useita samanlaisia tyhjiä pönttöjä. Vuosina 1987–92 pönttöalueella pesi vain nyt puheena oleva leppälintupari, mutta n. 300 kirjosiippoparia (100 pönttöä vuosittain). Leppälintu muni seitsemän munaa, kirjosiippo neljä samaan pesämaljaan. Siepon aloittaessa muninnan pesässä oli jo viisi leppälinnun munaa. Naaraat hautoivat vierekkäin yhtä aikaa. Kaikki leppälinnun munat kuoriutuivat ja kaikki poikaset lähtivät maailmalle. Siepon munista kolme kuoriutui, mutta poikaset kuolivat nuorina. Vielä pesäpoikasajan lopulla sieppopari ruokki leppälinnun poikasia lähes yhtä ahkerasti kuin leppälintupari. Lajien välillä ei esiintynyt nahistelua. Eri lajia olevat linnut olivat jopa yhtä aikaa pöntössä ruokkimassa.

## References

- Haartman, L. von 1969: The nesting habits of Finnish birds. I. Passeriformes. — Comment. Biol. Soc. Scient. Fennica 32:1–187.
- Hannila, J. & Järvinen, A. 1987: Feeding activity of hole-nesting passerines during the nestling period in northern Lapland. — Acta Reg. Soc. Sci. Litt. Gothoburgensis. Zoologica 14:102–108.
- Järvinen, A. 1977: Kirjosiepon aggressiivisuus (Aggressive behaviour in the pied flycatcher *Ficedula hypoleuca*). — Luonnon Tutkija 81:153.
- Järvinen, A. 1990: Incubation and nestling periods in hole-nesting passerines in Finnish Lapland. — Ornis Fennica 67:65–72.
- Järvinen, A. 1993: Spatial and temporal variation in reproductive traits of adjacent northern pied flycatcher *Ficedula hypoleuca* populations. — Ornis Scand. 24: 33–40.