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Population decrease of Starlings in northern Finland

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The Starling *Sturnus vulgaris* is one of the species whose populations have greatly increased and expanded in Europe from about the middle of the 19th century. In Scandinavia the species expanded its range along the coast of Norway and along both shores of the Gulf of Bothnia (MERIKALLIO 1916, JÄGERSKIÖLD 1919). By the turn of this century, the Starling had stabilized its position as a breeding species from SW Finland up to Oulu and Kuopio. Expansion continued northwards, and large areas were occupied in northern and eastern Finland around the 1950s (v. HAARTMAN et al. 1967—72). In SW Finland the populations continued to increase during the 1960s, and even poor habitats were occupied (TENOVUO & LEMMETYINEN 1970).

In the Oulu area (ca. 65°N, 25°30'E), the Starling is a common breeding species around human settlement, where nest-boxes are available. But observation of six different populations since the early 1960s has revealed that a strong decrease has taken place in recent years.

The study areas were: 1) Hietasaari, an old suburb near the centre of Oulu containing old houses, gardens and small fields; the nest-boxes, placed in gardens, varied in number from 10—12 in 1963—68 to 6 in 1977. 2) Hupisaaret, a large park in the centre of Oulu; the habitat has not changed significantly during the last two decades, but the number of nest-boxes decreased in 1963—77 from ca. 50 to 15. 3) Loppula, a typical agricultural area 15 km east of the town, consisting of small fields surrounded by forests, which has not changed significantly during the last 15 years; in 1963—77 the nest-boxes decreased from 15 to 7. 4) Taskila, a suburb of Oulu, where the boxes are situated in gardens and around small fields. The central field was abandoned in the late 1960s and soon became covered with dense vegetation of bushes, but some hundred metres away suitable fields still exist for Starlings, and gardens are also available. In 1969—77 the nest-boxes decreased from ca. 30 to 15. 5) Liminka (ca. 64°N, 24°25'E), an area surrounded by fields and meadows; since 1967 the number of nest-boxes has been 30 (HIRVELÄ 1977), and the habitat has not changed. 6) Utajärvi (ca. 64°48'N, 27°E), an area similar to that in Liminka; in 1968—77 the number of nest-boxes varied between 10 and 12.

The numbers of breeding pairs have declined in all the areas, but not simultaneously (Table 1). The population decrease evidently dates from the mid 1960s in Hupisaaret, from the late 1960s in Hietasaari, from 1972 in Taskila and Utajärvi, and from 1974 in Liminka. The suboptimal habitats were probably abandoned first. The population decline may be partly due to the decrease in the numbers of nest-boxes. However, in all years every area has contained more boxes than nesting pairs. When the population was dense (e.g. at Taskila, Utajärvi), Starlings also occupied boxes in poor condition

TABLE 1. Numbers of breeding pairs of Starlings in six populations in northern Finland in 1963—77.

Oulu	1963	64	65	66	67	68	69	70	71	72	73	74	75	76	77
Hietasaari	7	8	4	6	7	4	2	1	—	1	1	—	—	—	—
Hupisaaret	17	..	..	..	7	7	6	..	5	..	..	..	..	..	3
Loppula	8	7	6	7	..	..	..	..	..	..	..	..	..	..	—
Taskila	..	..	..	..	..	..	15	21	15	10	2	3	1	1	1
Liminka															
Virkkula	..	..	..	..	21	16	21	21	18	16	17	14	10	8	9
Utajärvi															
Juorkuna	..	..	..	..	..	7	9	4	5	3	2	2	5	2	1

and large boxes intended for the Goldeneye *Bucephala clangula*.

The spring and autumn flocks of Starlings also seem to have become smaller during the period 1960—77. In the early 1960s, flocks of several hundreds or thousands were not unusual. A roosting flock of no less than 11 000 birds was seen in autumn 1965 in Hupisaaret. But nowadays Starling flocks of some tens or hundreds are more common.

The decline in the numbers of Starlings is presumably due to several reasons. HIRVELÄ (1977) suggests that the huge increase in the use of herbicides has been fatal to Starlings. In spring, nearly all the intensively cultivated fields are sprayed with herbicides just when young Starlings are hatching. Biocides (e.g. DDT, PCB, Hg) applied in the summer and winter habitats may also have contributed to the decrease. Another factor responsible for the decline of Starlings may be the decrease in suitable habitats; in the 1970s in Finland, thousands of hectares of fields were abandoned and allowed to revert to forest. Measures taken to prevent Starlings from damaging fruit in gardens (e.g. REICH 1961) may also have contributed, by decreasing the stocks wintering in central and western Europe.

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Selostus: **Kottaraisen vähenemisestä Pohjois-Suomessa**

Kuudessa Oulun läänin kottaraispopulaatiossa on pesivien parien määrä pienentynyt tällä vuosikymmenellä (taul. 1). Suboptimaaliset ympäristöt, kuten puistot ja puutarhat, näyttävät hylätyn ensimmäisinä. Parhaiten kottaraiset ovat menestyneet laajojen viljelysaukeiden vaikutuspiirissä. Myös kottaraisten kevät- ja syysparvien koko näyttää pienentyneen tällä vuosikymmenellä.

Kantojen pienenemiseen johtaneet syyt lienevät herbisidien suuresti lisääntynyt käyttö, biosidit sekä peltojen paketointi, mikä on vähentänyt ruokailualueita.

Vetoomus:

Kirjoittajat toivovat saavansa suomalaisilta ornitologeilta asiaa valaisevaa lisäaineistoa kuluneelta kahdelta vuosikymmeneltä, esim. tietoja pihapiirissä rengastettujen kottaraispesyeiden määristä, kevät- ja syysparvien koosta jne.

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