

Observations on winter resting sites of the Yellowhammer *Emberiza citrinella*

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A considerable part of the Finnish Yellowhammer population overwinters here, in rural areas in particular. These granivorous birds make efficient use of the food supplies provided by man, so that we have good opportunities to observe their behaviour. The present records on the winter resting sites of Yellowhammers were made in the daytime in a courtyard in Kälviä (64°N), W Finland.

As the Yellowhammers lived under a constant threat of predation by Sparrowhawks *Accipiter nisus*, they usually preferred to perch in solitary trees with good visibility all around. During hard frost and wind, however, many of the birds sheltered under snowy junipers and spruce branches hanging down to the snow (see also Wallgren 1954). In the early winter of 1984/85, snow-covered hollows were created on the ground, because the snow depth of 4 cm was not enough to press down the coarse stalks of grass. These hollows were occupied by some of the Yellowhammers during feeding pauses on cold days.

It was customary to shovel snow against the basement of the house, to improve the insulation, and the heat radiating from the house melted a 5-cm crevice between the basement and the snow. Some of the Yellowhammers often rested there in the daytime, and presumably at night, too, because one night a Yellowhammer was caught by a mink *Mustela vison* in the crevice.

In the winter of 1978/79 there was a pile of sand in the yard, and a snowdrift formed on the leeward of the pile. Overhanging snow at the upper edge of the drift formed a cavity, where some of the Yellowhammers sheltered from the cold. This shelter resembled those reported by Lagerström (1979) for the Goldcrest *Regulus regulus* and the Dipper *Cinclus cinclus* (see also Novikov 1972).

On 10 February 1985 there was a blizzard and the air temperature was -19°C. At 10.30 a flock of 20 Yellowhammers was flushed from the snow on the leeward of a thicket. Small hollows were found in the snow, where the birds had apparently been sitting with their backs on a level with the surface. It was not clear whether they had burrowed deliberately or been covered by the whirling snow, but at least they did not seem to find the snow uncomfortable.

Among the small passerines in Finland, snow burrows constructed by the birds themselves have been reported in the Redpoll *Carduelis flammea* (Siivonen 1963, Sulkava 1969), the Bullfinch *Pyrrhula pyrrhula* (Sulkava 1969), the Great Tit *Parus major* (Helle 1980), the Snow Bunting *Plectrophenax nivalis* (Marjakangas 1981) and the House Sparrow *Passer domesticus* (Tuomikoski 1983). In Britain, Spencer (1982) discovered Skylarks *Alauda arvensis* roosting in this way. Whether the Yellowhammer should be added to this list depends on further observations. In any case there seems to be a number of passerine species that are able to use snow holes, although these may not be as advantageous for small birds as for the larger gallinaceous species (Korhonen 1981).

In February 1985 the Yellowhammers frequently gathered in small groups on the snow at the foot of bushes at noon to enjoy the sunshine. Sunbathing probably decreases the need for metabolic heat production in cold weather. Thus the Yellowhammers possess a set of behavioural adjustments to the winter cold, in addition to morphological and physiological adaptation (see Wallgren 1954).

Selostus: Havainnot keltasirkkujen talvisista lepopaikoista

Havainnot tehtiin päiväsaikaan erään talon pihapiirissä Kälviällä, Keski-Pohjanmaalla. Tavallisesti keltasirkut viettivät lepohetkensä puissa voidakseen samalla havaita mahdollisesti lähestyvät varpushaukat, mutta kovalla pakasella ja tuulisella säällä monet sirkut suojautuivat lumen peittämiä katajien ja kuusten alaoksien alle tai heinänkorsien varaan muodostuneisiin lumen kattamiin onkaloihin. Yhtenä lepopaikkana oli talon kivijalan ja sitä vasten lapioidun lumen väliin sulanut rako, jossa keltasirkkuja saattoi oleskella myös öisin. Talvella 1978/79 pihalla olleen hiekkakan suojapuolelle kasvoi lumikinos, jonka yläreunaan syntyneen lipan alle muodostuneessa onkalossa muutamat keltasirkut lepäilivät kylmällä säällä. Helmikuun 10. 1985 lumituiskun aikana ja ilman lämpötilan ollessa -19°C ajettiin tasaisesta ludesta 20 keltasirkkuja, mutta jäi epäselväksi, olivatko ne kaivautuneet vai antaneet tuiskun peittää itsensä. Keltasirkut ottivat myös aurinkokylpyjä ja niinpä ne näyttävät sopeutuneen monella tavalla talven kylmyyteen.

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