Fringilla coelebs "stupida" — a case of behavioural anomaly in nest building

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In this brief report I describe an anomalous behaviour of the Chaffinch Fringilla coelebs and try to give a possible explanation for it.

A female Chaffinch caught my attention in Taipalsaari, SE Finland, on 24 May 1981. She walked (never hopping!), with a somewhat strange posture, in broad niches located under the ceiling within a veranda and hastily explored their six corners. After a couple of hours I placed a Chaffinch nest — old, but in good repair — in one of the corners. When the bird visited this corner, it was frightened at first but then carefully examined the nest, once even sitting in it. She then went to another corner and began a rolling manoeuvre. After about ten minutes she examined the old nest again, returned to make "spinning" movements in the previous corner and then examined two of the other corners. Finally she went to the old nest, tearing it until it was demolished. During all these manoeuvres the male was in the neighbourhood and warned *pink, pink* if anybody appeared on the veranda.

"Spinning" was apparently a fixed (stereotypical) action pattern related to "testing" the suitability of a nest site (see Haftorn 1954:130) and, in a later phase, to fastening spiderwebs as a base adhesive for the prospective nest. Although this behaviour occurred repeatedly, no spiderwebs were found in the niches.

On 25 May, I followed the "nest-building" from 0700 hours onwards. At 0830 hours the behaviour appeared to have "ripened" to the stage of carrying nest material to the cornerns, but this occurred randomly at one corner or another, until the bird finally chose a particular one. She "moved" the non-existent spiderweb with her beak and "fastened" it to the nest material (tow and hay) using rotating movements. She then flew away, with the result that the tuft was flushed down by air currents. (Even more generally, the Chaffinch is known not to rush after lost pieces of nest material; see Haftorn 1954). This activity continued in the same way at least until 27 May. I did not count the daily number of efforts the female made, but there must have been dozens of them.

When I resumed observation on 4 June, nest building continued. There was a pile of tufts on the veranda floor, but virtually nothing in the niches. The female behaved as earlier, but with gradually lengthening breaks. The useless work continued until 10 June, but only occassionally. On 11 June the bird visited her favourite corner and then disappeared.

The Chaffinch nests nearly exclusively in trees and bushes, and only exceptionally in buildings or other human constructions (v. Haartman et al. 1967–72). However, the stubborn attempt in building a nest very close to humans is an extreme case. Presuming that the physiological condition of the female was normal, the explanation for its peculiar behaviour may be found in the strong stimulation caused by the many attractive corners. There was a similar case in the Redwing *Turdus iliacus* (Palmgren 1954:90): a row of many similar, decorative boxes in a brick fence stimulated nest-building behaviour. As a result, there were eleven nests close together and in different stages of completion. The Redwing laid eggs in two nests but finally chose only one. In contrast, the observed Chaffinch was unable to fix the nest material to the niches. The reason for this was apparently not the special structure of the niches themselves, but rather the bird's inability to use spiderwebs as a base adhesive. The reasons for this inability are not known. However, the Chaffinch never hopped (cf. Haftorn 1954:135) but walked very hastily, quickly nodding its stiffly erected head. The basis of such movements could be a deficiency in the central nervous system that could also cause other behavioural disturbances.

At the beginning of nest-building, a bird usually selects two (or more) nest sites corresponding physiognomically with the fixed action patterns of the bird (e.g. Palmgren 1954). Haftorn (1954) has thoroughly described this phase of the Chaffinch's nest-building. It is evident from his analysis that the correct use of spiderwebs is important in fixing the nest to its base and making it firmer. Nest-building in the Chaffinch lasts 3–18 days (v. Haartman et al. 1967–72). Interestingly, in the present case nest-building stopped after about 18 days.

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Selostus: **Pesimispuuhissaan vajavaisesti käyttäytyvä peippo**

Kesällä 1981 havaitsin Taipalsaarella peipon yrittävän pesimistä kuistin katonrajassa sijaitsevien lokeroiden nurkkiin. Naaras herätti huomiota hermostuneella kävelemisellään (lintu ei koskaan liikkunut hyppimällä). Lintu tutki lokeroita sattumanvaraisesti tehden nurkissa pyöriviä liikkeitä, jotka normaalissa pesänrakennuksessa olisivat sen alkuvaiheessa merkinneet pesäpaikan soveltuvuuden testausta ja myöhemmin auttaneet hämähäkin seitin kiinnittämistä tulevan pesänrakennusaineksen kiinnikkeeksi. Vähitellen naaras keskitti pesänrakennuksensa yhteen nurkkaan, mutta aina naaraan lennähtäessä hakemaan uutta pesäainesta, äsken tuotu tukko putosi kuistin lattialle. Noin 18 päivää — tämä on muuten sama kuin pisin tunnettu peipon pesäntekoon käyttämä aika — kestäneen puuhastelun seurauksena kuistin lattia täyttyi pesäaineksesta, mutta pesimähyllyt olivat lähes tyhjät. Peipponaaraan itsepintainen "pesänteko" selittynee sillä, että lukuisten houkuttelevien ja samanaikaisesti näkyvien pesänurkkausten aiheuttama ärsyke oli liian voimakas. Ratkaisevasti naaraan epäonnistumiseen vaikutti kyvyttömyys käyttää hämähäkin seittiä sidosaineena; on mahdollista, että sekä tämä kyvyttömyys että outo liikkumatapa palautuisivat johonkin keskushermoston häiriöön.

References

v. Haartman, L., Hildén, O., Linkola, P. & Tenovuo, R. 1967–72: Pohjolan linnut värikuvin II. — Otava, Helsinki.

Haftorn, S. 1954: Noen iakttagelser over reirbygging og forplantningsforhold hos bokfink (Fringilla coelebs L.) ved Drammen i årene 1937–1953. — Naturen 5:130–143

Palmgren, P. 1954: Eläinpsykologia. — Otava, Helsinki.

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Commemorating the centennial of Einari Merikallio's birth

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Einari Merikallio (born 29 February 1888, deceased 8 January 1961) promoted the study of Finland's avifauna more than anyone, since J.A. Palmén, and pioneered a new approach to exploring bird distributions (Anon. 1958, 1961). Merikallio's quantitative estimation of the pair numbers of terrestrial birds in Finland facilitated the study of the ranges and habitat distributions of each species in a novel way. Also, his work provided an incomparable asset for future studies of bird population changes.

Merikallio was born in Oulu. He acquired his M.Sc. at the University of Helsinki in 1912, majoring in zoology. His M.Sc. thesis examined the bird fauna in the archipelago between Oulu and Ii in the Bay of Bothnia. Merikallio mainly worked in the field of education: he taught biology in Riihimäki, Helsinki and Kerava in 1913–24 and was the headmaster of a secondary school at Kerava in 1925–55. He was also an athlete — Merikallio was even nominated to the Finnish team of gymnasts for the London Olympics in 1908 (his studies, however, prevented him from participating); and he was a devoted choir singer and a keeper of a kennel for a special Finnish breed of dog (for additional details, see Vainio 1962, Nurminen 1982, Sampola 1982). Merikallio acquired his Ph.D. in 1946, and he was appointed Professor *honoris causa* in 1958. Merikallio was long active in the Finnish Ornithological Society; Vice-president in 1924–55 and President in 1956–60. In 1924–40 he was the co-editor of Ornis Fennica, at first together with Ivar Hortling and later with Pontus Palmgren.

Merikallio thoroughly studied the composition of the breeding bird fauna in different parts of Finland. He promoted amateur ornithology through his popular books on Lake Äyräpäänjärvi, on the Karelian Isthmus (Merikallio 1929) and on the island group of Heinäsaaret, along the Arctic coast (Merikallio 1924, 1939). Being one of the first bird photographers in Finland, Merikallio illustrated his books himself. He also assembled a notable egg collection that is now deposited in the Zoological Museum of the University of Oulu along with Merikallio's archives. The