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Nest-sites of the Common Buzzard *Buteo buteo* in Finland

TAPIO SOLONEN

The function of the nest in birds is to provide shelter for the eggs and nestlings, especially against potential predators. The nest-sites are accordingly so selected that they are either well concealed or as inaccessible as possible. Some species meet these requirements by selecting their nest-sites from a wide range of possible kinds (eurytopic), while others make their choice from a much smaller number of alternatives (stenotopic; see also Newton 1979). Of the two Finnish *Buteo* species, the northern Rough-legged Buzzard *B. lagopus* seems to have a fairly wide range of sites, nesting commonly in trees, on cliffs and on stones (v. Haartman et al. 1963—72), while the southern Common Buzzard *B. buteo* has a rather narrow range, usually choosing one of the tallest trees in the forest. However, the old phrase "no rule without exceptions" also applies here.

This report was prompted by some observations made in a territory of the Common Buzzard in Luumäki, South Karelia (61°N, 27°E). The first nest was found in 1974 in a typical site, a comparatively thick spruce near coniferous forest, a bog and a clearing, but the nest was located only c. 5 m above the ground and was rather exposed. At least two fledglings were produced. The same nest was in use in 1975, but fell to the ground with half-grown nestlings, though one of the young possibly survived. The territory was occupied again in 1976, but the nest was found only after a long search. It was situated on top of a *rapakivi* boulder, 4 m above the ground, and about 400 m from the previous nest-site. Of the two large nestlings one was later found dead in the vicinity. In 1977—78 another nest-site was chosen, a spruce of medium age near a rock outcrop and a little field, about 600 m from the nest-site of the preceding year. The nest was well concealed and located at a height of about 9 m. Breeding was successful and two and three young were produced in the two years. During winter 1978/79 the nest fell down and was not re-established. The new nest-site was again hard to find, a slim spruce between a cultivated field and a small road, about 400 m from the earlier nest. It was evidently built in an old squirrel's nest, at a height of about 5 m. Probably two young fledged. Later no occupied nests were found within the territory; the birds possibly failed to breed due to the scarcity of voles.

According to a recent sample ($N = 41$), mostly from Uusimaa, southern Finland (Solonen 1979 and unpubl.), Common Buzzards usually nest in spruces (66 %), but pines (22 %) and birches (10 %) are also accepted (Table 1). Published data from other localities in Finland (Ahola 1977, Eskelinen 1978) show more or less similar nest-site preferences with some regional and temporal differences, and the same holds for the older material from the whole country (v. Haartman et al. 1963—72). The nesting height above the ground is usually about 10 m (4—20 m, $N = 164$) (v. Haartman et al. 1963—72, Ahola 1977). The Finnish literature mentions only a few exceptional cases of Common Buzzards breeding on cliffs (v. Haartman et al. 1963—72, Oittinen 1979).

The nest-site is often a compromise between two factors: good shelter may compensate for a poor substrate, or *vice versa*. In the case of the Common Buzzard, spruces usually provide relatively good shelter but the branches may be too weak to give enough support to the roughly constructed nest (cf. Palmgren 1932). Conversely, old birches (and other deciduous trees), often provide excellent foundations for nests, but the foliage may be located too high to provide concealment from all directions. In these respects pines may be intermediate between spruces and deciduous trees. In the case of exceptionally good branches, the cover needed is often provided by surrounding trees, and without it the site is not accepted.

Although generally relatively narrow in their nest-site selection, Common Buzzards may build their poorly constructed nests on many kinds of substrates in suitable habitats. The foundations may be tree branches of varying strength and suitability, old nests of other species (e.g. raptors, crows, squirrels), and artificial nests in trees. Exceptionally, the ground may be chosen, but the species prefers sites above the general level of the surroundings. Nests on the ground may be successful and used in places where certain mammalian predators are absent, where a peak of small rodents provides abundant food, and where other nest-sites are not available.

Exceptional nest-sites may be regarded as

TABLE 1. Nest-sites of the Common Buzzard *Buteo buteo* in Finland. Sources: southern Finland, Solonen 1979 and unpubl.; central Finland, Ahola 1977, Eskelinen 1978, Oittinen 1979; whole country, v. Haartman et al. 1963—72.

Nest-site	Southern Finland		Central Finland		Whole country		Total	
	N	%	*N*	%	*N*	%	*N*	%
Spruce	27	65.9	29	48.3	86	60.6	142	58.4
Pine	9	22.0	25	41.7	46	32.4	80	32.9
Birch	4	9.8	5	8.3	7	4.9	16	6.6
Aspen	—	—	—	—	1	0.7	1	0.4
Alder	—	—	—	—	1	0.7	1	0.4
Cliff	—	—	1	1.7	1	0.7	2	0.8
Boulder	1	2.4	—	—	—	—	1	0.4
Total	41		60		142		243	

adaptations to exceptional circumstances, e.g. to the lack of suitable sites of the traditional kind, or as occasional experiments. In some respects they may be better, similar, or worse than the usual nest-sites, and, accordingly, their use in the population may increase, remain occasional, or decrease (cf. Newton 1979). An advantage of an exceptional nest-site is that, even when more exposed than usual, it may not be found by a predator searching for the normal kind of sites, e.g. the Marten *Martes martes* in search of nests in big trees. As regards the more or less exceptional nest-sites of the Buzzard reported here, many seemingly better nesting trees were available in the vicinity. The decisive factor in the nest-site selection was probably simply the relatively strong and safe base for the nest. This was selected in preference to concealment, but the very unusualness of the site would somewhat reduce the probability of discovery.

Selostus: **Hiirihaukan pesäpaikoista**

Verrattuna lähisukulaiseensa piekanaan, joka pesii yleisesti niin puissa, kallionkielekkeillä kuin kivenjärkäleilläkin, hiirihaukan pesäpaikkavaatimukset ovat suhteellisen ahtaat. Se valitsee pesäpaikakseen tavallisesti jonkin metsän kookkaimmista puista. Suomessa hiirihaukan pesä sijaitsee yleensä kuusessa (58 %), varsin usein männyssä (33 %), ja lehtipuista tavallisimmin koivussa (7 %) (taul. 1). Pesäpaikan valinnassa on todettu ajallisia ja alueellisia eroja. Pesän sijaintikorkeus maasta on keskimäärin noin 10 (4—20) m. Suomalainen kirjallisuus mainitsee vain pari maapesintää kallionkielekkeellä. Kirjoittajan havaintosarjan mukaan eräällä eteläkarjalaisella reviirillä hiirihaukat pesivät tarkemmin tarkastellen varsin vaihtelevissa pesäpaikoissa. Vaikka pesä yleensä olikin kuusessa, sen sijoitus puuhun sekä puun rakenne ja kasvuympäristö vaihtelivat. Kerran pesäpaikkana oli ilmeisesti vanha oravan pesä nuorehkossa kuusessa aivan pellonreunan ja kapean metsätien välissä. Poikkeuksellisin pesäpaikka sijaitsi noin nelimetrisen rapakivilohkareen päällä metsikön keskellä. Edellisenä vuonna pesintä oli poikasvaiheessa jatkunut noin 5 m korkeudelta kuusesta sammalmättäälle pudonneessa pesässä.

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