

viss kringsyn troligen finns, framgår av att i de här rapporterade fallen holkarna fyllts med bomaterial upp till ingångshålet. Därmed ökas i någon mån den ruvande fågelns möjlighet att spana av omgivning- en. I samma riktning pekar det faktum, att de i litteraturen beskrivna holkhäckningarna ofta gällt holkar, som antingen anpassats för grå flugsnappare genom att halva framsidan är öppen, eller vars hål förstörats kraftigt av större hackspett.

Hur en fågel placerar sitt bo är naturligtvis av avgörande betydelse för möjligheten att genomföra en framgångsrik häckning. Beteendet är därför hård- bevakat av det naturliga urvalet. Avvikelser från det normala kan vara fatala misstag, men de kan också avslöja en fågels förmåga att finna bästa boplace- ringen i en, även tillfälligt, förändrad omvärld. Det är därför klokt att rapportera ovanliga boplaceringar, t.ex. i form av korta meddelanden i *Ornis Svecica*. De blir därmed arkiverade på ett tillgängligt sätt och en dag kanske värdefulla i sådana analyser, som syftar till att avslöja, vilka faktorer som styr en arts val av plats för bobygget.

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Summary

Robin Erithacus rubecula breeding in nest-boxes – an accidental event?

In a study area, situated about 10 km south-east of Göteborg in south-western Sweden, 100 nest-boxes

for Tits and 300 for Treecreepers have been erected in deciduous forests, covering an area of about 6 km². The occupation of the nest-boxes has been recorded over the course of 20 breeding seasons. The area holds a mostly migrating population of Robins. Their nests are almost exclusively placed on the ground. Nevertheless, Robins have nested in my boxes on three occasions, all of them in one and the same year, 1989, and in the same part of the study area. That particular season was characterised by an enormous increase of the Bank Vole *Clethrionomys glareolus*, by far outnumbering that of the other observed population peaks of this cyclical species during the study period. This coincidence between the moving up of some breeding Robins and the extremely high population peak of the voles suggests that the two events were causally connected in some way. A reasonable interpretation is that the Robins in question have responded to the crowds of voles by leaving the ground to breed in nest-boxes, thus avoiding the increased prevailing risk of nest predation. In fact, even small rodents may prey on eggs and young nestlings of ground-nesting passerines (e.g. Bures 1997). Thus, the cases of nest-box breeding by Robins, although a rare occurrence, should not be considered merely as accidental events. It may indicate the adaptive capacity of the bird to strongly modify its selection of the best possible nest-site to cope with seldom occurring events or circumstances.

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Breeding birds in hop fields

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Published information about birds living in agricultural habitats are extensive, though not exhaustive. Qualitative data are available for several geographic areas (e.g. O'Connor & Shrubbs 1986; Pain & Pienkowski 1997 and references therein). On the other hand, information about breeding birds in particular types of fields, e.g. hop fields, are scarce. Therefore the aim of this note is to present data on the breeding birds of hop fields.

Study area and methods

The study fields are situated in the lower Savinja



Hop field with wooden poles, nesting places for some bird species in Slovenia. Upper left: general overview. Upper right: Common Starling *Sturnus vulgaris* at the nest hole, 2 June 1998, Braslovce. Lower left: Male House Sparrow *Passer domesticus* near the nest hole, 5 July 1998, Trnava. Lower right: Great Spotted Woodpecker *Dendrocopos major* near nest hole, 3 May 1998, Trnava.

Humlefält med tråpölar, boplatser för vissa fåglar i Slovenien. Övre vänstra: allmän översikt. Övre högra: stare vid bohålet. Nedre vänstra: hane av gråsparv nära bohålet. Nedre högra: större hackspett nära bohålet.

valley (approximately 46°16'N 15°03'E) in central Slovenia. Only fields with wooden poles were taken into account. Altogether, 53 fields of various sizes (with a total surface area of approximately 400 ha) were surveyed in 1998 between April and July. The field type (i.e. crop) is representative of the agriculture in the region. On each field only qualitative data (presence or absence) about hole-nesting birds were collected. At each occupied hole I estimated the height above the ground. The height of holes were divided for further statistical analyses into four categories: 0–1.5 m, 1.5–3 m, 3–4.5m and 4.5–6 (maximum height of the poles) m. The average diameter of the poles were at breast height 45 cm (n = 35). Fields were selected without prior knowledge of breeding birds.

Results and discussion

A total of six bird species were found in hop fields during the study. All species that were recorded as

breeding in the hop fields nested in holes in the poles. The species are listed in Table 1, which also gives the frequency of their occurrence on hop fields. 41 hop fields (77%) were occupied with at least one species.

Table 1. Hole breeders in hop fields in central Slovenia and their frequency, per cent of 53 fields with the species.

Hålhäckare i humleodlingar i centrala Slovenien och deras frekvens, procent av 53 fält med häckning av arten.

Species Art	Frequency (%)
<i>Passer montanus</i>	41.5
<i>Sturnus vulgaris</i>	22.6
<i>Dendrocopos major</i>	5.7
<i>Passer domesticus</i>	5.7
<i>Muscicapa striata</i>	3.8
<i>Jynx torquilla</i>	1.9

The most common species was Tree Sparrow *Passer montanus*.

All species were breeding in old Great Spotted Woodpecker *Dendrocopos major* holes or in natural holes in the poles. Birds were not breeding at all in the lower quarter of poles. Most pairs bred in holes which were situated in the highest part (Chi-square = 21.1, df = 2, P < 0.0001).

In the literature I could not find any data about breeding birds in hop fields. However, Rutgers (1969) presents a picture of a pair of Black-headed Bunting *Emberiza melanocephala* sitting on the outer twig of hop.

The Great Spotted Woodpecker is very flexible in choice of habitats and nesting sites (e.g. Cramp 1985, Glue & Boswell 1994). However, Glue & Boswell (1994), who studied British woodpeckers, did not mention that this species breed also in hop fields. Only Vogrin (1996) mentioned that Great Spotted Woodpeckers probably breed in poles on hop fields. In 1998 I found three fresh holes, two still with young.

What could be the reason that birds nest in hop fields? A wide range of circumstantial and experimental evidence has shown that increase in the number of nesting holes is followed by increases in the abundance of cavity-nesting birds (e.g. Newton 1994 and references therein), implying that hole nesters are limited mainly by the availability of suitable nest sites (Newton 1994). This holds true also in my mainly intensive agriculture area. Furthermore, another reason for birds associating with hop might be the fact that it is the (main) food source for several species of caterpillars, e.g. Red Admiral *Vanessa atalanta*, Comma Butterfly *Polygonia c-album*, some Daggers e.g. *Orthosia incerta*, *Orthosia munda*, *Acronicta rumicis*, and *Abrostola trigemina* which are important food for birds.

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Sammanfattning

Häckfåglar i humleodlingar

Det finns gott om information om fågellivet i olika jordbrukslandskap. Däremot finns det mindre med uppgifter från specifika grödor. Jag har inte hittat något om fågellivet i humleodlingar. Därför rapporterar jag här vad jag funnit under inventering av 53 humleodlingar om tillsammans ca. 400 ha.

Studien utfördes i nedre Savinjadalen i centrala Slovenien från april till juli 1998. Endast fält med träpålar (stödpålar för humlen) inventerades. Pålar- nas genomsnittliga diameter var 45 cm (35 stycken mätta) och deras höjd var upp till sex meter. Fälten valdes utan föregående kunskap om fågelfaunan. Endast kvalitativa data insamlades, d.v.s. vilka arter som häckade i respektive odling. Jag mätte också höjden för de bohål som påträffades.

Totalt registrerades sex arter. De påträffade arter- nas frekvens listas i Tabell 1. Minst en art påträffades i 41 av odlingarna (77%). Den vanligaste arten var pilfink. Alla registrerade häckningar skedde i hål av större hackspett. De flesta bebodda hålen låg i pålar- nas övre del, medan inga häckningar noterades i den lägsta fjärdedelen.

Större hackspetten är mycket flexibel i sitt val av häckningsplats, men något säkert bevis för häckning i humlepålar känner jag inte till tidigare. Jag påträffade tre färska hål, varav det fortfarande fanns ungar i två. Anledningen till att så många fåglar häckade i humlefälten var säkerligen den förhöjda tillgången på bohål som hackspettarna orsakade. Det är välkänt att hålhäckande arter ofta begränsas av tillgången på bohål. Ett ytterligare skäl torde vara att det är gott om föda åt fåglarna i humleodlingarna. Det finns nämligen gott om larver av olika insekter, eftersom humle är en huvudföda för flera sådana arter.

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