

**THE EFFECT OF EGG REMOVAL ON THE CLUTCH SIZE  
IN THE STARLING *Sturnus vulgaris***

*Utjecaj uklanjanja jaja iz gnijezda na veličinu pologa u čvorka *Sturnus vulgaris**

**ZDRAVKO DOLENEC**

*Department of Zoology, Faculty of Science, University of Zagreb, Roosaveltov trg 6  
HR – 10000 Zagreb, Croatia, e-mail: dolenecc@zg.pmf.hr*

It is well known that different bird species react to egg removal during the laying period in different ways. In some cases the number of eggs laid is independent of whether eggs are present in the nest or not. In other cases, the number of eggs laid may be considerably extended by removing eggs as they are laid, the bird continuing to lay until the number of eggs present in the nest is approximately the normal clutch-size (LEHRMAN, 1959). EISENHUT & LUTZ (1936) took one egg from the Tree Sparrow *Passer montanus* nest after every third or fourth laid egg. Tree Sparrows laid a total of 5 to 6 eggs, which is typical for that species. However, according to RADERMACHER (1975), the Tree Sparrow laid a total of 9 eggs after the removal of eggs. In the Starling *Sturnus vulgaris* CHAVIGNY (according to SCHNEIDER 1972) took every egg laid after the third egg. The female laid a total of 15 eggs before the experiment was interrupted.

I made an experiment with egg removal on the nest box population of the Starling in the Mokrice area (45°00'N; 15°55'E), NW Croatia. The manipulation was done on a total of 12 nests (first clutch, April 2003). Each morning I checked nest-boxes to determine the timing of clutch initiation. In two nests I removed all eggs laid after the first laid egg, in two nests after the second, in two nests after the third, in two nests after the fourth and in two nests after the fifth laid egg. In two nests I removed the first laid egg and every egg laid after the first one. Eggs were removed from the nests on the days they were laid.

In the nests where the first laid eggs were removed, one female responded by deserting the nest and the other female stopped laying after the fourth egg was laid. After removal of eggs in other ten nests females continued with laying to the fifth, sixth or seventh egg. It appears that egg removal didn't increase the number of eggs laid. The average removal clutch size (i.e. total number of eggs laid in response to egg removal) of these ten nests was 6.11 eggs. It is not a significant difference ( $\chi^2 = 0.004$ ,  $df = 1$ ,  $p > 0.05$ ) in relation to the average clutch size in Starling in this area (DOLENEC, 1997).

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### SAŽETAK

U ornitološkoj se literaturi spominje različito ponašanje ptica ako im uzimamo jaja tijekom nesenja. Neke su ptice snesle znatno više jaja u odnosu na broj karakterističan za vrstu, dok u drugih to nije zabilježeno. Na području Mokrica (sjeverozapadna Hrvatska) uzimao sam jaja čvorka *Sturnus vulgaris* iz parova gnijezda (prvi polog, 2003. godine). Iz jednog para uzimao sam svako sneseno jaje, iz drugog para svako jaje sneseno nakon prvog jajeta, iz trećeg para svako jaje sneseno nakon drugog jajeta i tako dalje – do šestog para gnijezda gdje sam uzimao svako jaje sneseno nakon petog jajeta. U gnijezdima gdje sam uzeo i prvo jaje ptice su prestale nesti dok su u ostalim gnijezdima nesle do broja karakterističnog za vrstu. U prosjeku je sneseno 6,11 jaja po gnijezdu što nije značajno različito od prosječne veličine pologa čvorka utvrđene u dosadašnjim istraživanjima iste populacije.