

Longevity of Black Stork (*Ciconia nigra*) nests and nest site protection in Latvia

Maris STRAZDS

We have analysed Black Stork nests that are regularly controlled since 1978. The nests found before 1980 ($n = 17$) had an average age of 22 years (16 - 40); nests found during 1981-1990 ($n=16$) were on average 16,1 (11 - 20) years old. All nests were of unknown age when found. The longest un-interrupted successful breeding in one nest so far lasted 11 years (as long as that nest has been known). Nest changes are predicted mostly by either collapse of nest site or disturbance. Collapses are often caused by nest size - old nests can reach 170 x 155 x 115 cm dimensions and are estimated to exceed one ton in weight; average nest sizes are 115 x 111 x 49 cm ($n = 139$). Of these, only 13 nests have an age known with precision.

Disturbed birds tend to move further away, on average 993 m ($n = 25$; 60 - 2350 m), than undis-

turbed ones, only 99 m ($n = 39$; 0 - 960 m) to build new nest. Main causes for disturbance are of human origin, however predator disturbed birds ($n = 2 - 2,150$ and 2,350 m) move also far away; more than 10 predated nests are followed, only two have been reoccupied after some years. Based on these data a micro reserve size was suggested for the Black Stork - 250 m radius around the nest site or on average 20 ha. These would include 84 % of non-disturbed natural movements. Considering that the micro reserves should not be limited to a fixed radius but by the shape of old-growth forests, they would include 89% of natural movements. The government has accepted our proposal and according to new regulations (accepted on 30 January 2001) around each long-living stork nest a micro reserve 10-30 ha wide shall be designated. A seasonal buffer zone (up to 30 ha in total) is required too.

Longévité des nids de Cigogne noire et protection des sites de nid en Lettonie

Nous avons analysé les nids de Cigognes noires qui sont régulièrement contrôlés depuis 1978. Les nids trouvés avant 1980 ($n=17$) sont âgés en moyenne de 22 ans (16-40); les nids trouvés durant la période 1981-1990 ($n=16$) ont en moyenne 16,1 ans (11-20). Nous ne connaissons pas l'âge de ces nids lors de leur découverte. La plus longue série de reproduction réussie dans un même nid est jusqu'à présent de 11 années (depuis que le nid est connu). Les raisons principales du changement de nid sont la chute

de celui-ci ou les dérangements. La chute du nid est souvent causée par sa taille - les plus vieux peuvent atteindre des dimensions de 170 x 155 x 115 cm et ont un poids estimé à plus d'une tonne. La taille moyenne des nids et de 115 x 111 x 49 cm ($n = 139$). On connaît l'âge exact de ces nids seulement.

Les oiseaux dérangés ont tendance à s'éloigner en moyenne de 993 m ($n = 25$; 60 - 2.350 m), tandis que ceux qui ne le sont pas, de seulement

99 m (n = 39; 0 - 960 m). Les principales causes de dérangements sont d'origine humaine. Les oiseaux dérangés par un prédateur se déplacent assez loin (n = 2; 2.150 et 2.350 m). De l'ensemble des dix nids ayant subi une prédation, seulement deux ont été réutilisés ultérieurement, après quelques années. A partir de ces données, nous avons suggéré la création d'une micro-réserve autour de chaque nid de Cigogne noire : 250 m de rayon ou une moyenne de 20 hectares autour du nid. Cette zone inclurait également 84 % de formations naturelles. En considérant que ces zones mises en réserves ne doivent pas avoir un rayon bien défini mais plutôt se calquer sur la forme des peuplements âgés, elles incluent

alors 89 % de formations naturelles. Le gouvernement vient d'accepter notre proposition (au 30 janvier 2001) et, selon la nouvelle législation, chaque nid de cigogne encore utilisé sera entouré d'une micro-réserve de 10 à 30 ha. Une zone tampon saisonnière (portant la surface à 30 ha au total) est aussi établie.

Maris STRAZDS
Latvian Ornithological Society
Box Office 1010
LV - 1050 Riga

Spatial pattern of Black Stork (*Ciconia nigra*) territories in Kemer National Park, Latvia

Maris STRAZDS, Andis LIEPA & Janis KUZE

Studies on Black Storks are carried out since 1990 in the territory of the Kemer National Park. In this territory a high density of breeding Black Storks is recorded - 5 nests are known within a 5 km² area, 4 of them successful in 1997 (the 5th was discovered in 2000). The shortest distances between these 4 nests are 1,400 m, 1,180 m and 3,500 m. However this traditional approach does not show the accurate situation of each nest. If measuring the shortest distances to the four closest neighbouring nests in N, E, S and W sectors, the average distances for these 4 nests were 4,945 m, 3,970 m, 4,060 m and 4,495 m (avg 4,367 m) and the most successful nest (successful breeding for 11 subsequent years i.e. as long as the nest has been known) appeared to

be the most isolated one. The feeding flights were found to cross neighbours' territories and birds from several nests were observed to forage at the same spot (sometimes simultaneously). The territorial soaring of single birds (and possibly also display flights of pairs) seem to be most intense on the edge of "territories". As the feeding and flight observations are based on either accidental sightings collected during 11 years or on visual observations (simultaneously from different localities) only, and as no adult birds are individually identifiable by rings, these data shall be considered as preliminary. For detailed analysis of habitat use and territorial integrity of each nest, radio telemetry studies are necessary.