

Distribution dynamics of the White Stork *Ciconia ciconia* in the Baltic area

HEINRICH VEROMAN

VEROMAN, H. [Institute of Zoology and Botany, Academy of Sciences of the Estonian S.S.R., SU-202400 Tartu, 21 Vanemuise Street] 1976. — *Distribution dynamics of the White Stork Ciconia ciconia in the Baltic area*. Ornis Fenn. 53: 150—152.

As a breeding bird, the White Stork has been long-established only in the southern part of the Baltic area. In Lithuania and in the greater part of Latvia it was already numerous as a nesting species at the end of the 18th century at latest, but it did not occur north of the Daugava river until the early 19th century. The first pair of White Storks bred in the territory of present-day Estonia (Vastseliina) in 1841. From the mid-nineteenth century onward, the White Stork population of the Estonian area has been gradually increasing. At the 1974 census, there were 1 060 pairs breeding in Estonia. The White Stork has also increased in the neighbouring area, namely the Pskov Region of the R.S.F.S.R.

The White Stork is known to have nested in considerable numbers in Lithuania and in the greater part of Latvia by the end of the 18th century at latest (FISCHER 1791, BESEKE 1792, etc.). The northern boundary of the range of the species in the Baltic region ran along the line of the Daugava river. North of this river the White Stork was met with only as an accidental (MEYER 1815, HUECK 1845, RUSSOW 1870, 1880).

The first nest of the White Stork known in Estonia was found in 1841, on the ruins of Vastseliina Castle in south-east Estonia (HUECK 1845). From the middle of the last century onward, the White Stork nested more frequently in south Estonia. The population of White Storks in the present-day territory of Estonia was thus founded 100 to 140 years ago. By 1855, nesting of the White Stork north of the Daugava was no longer a rare occurrence (HUMMEL 1855, BÜTTNER 1858). The population suffered a setback in 1856; the spring was late, the White Storks ar-

rived in small numbers, and many nests remained empty. In places, for instance in the vicinity of Tartu, the first nests appeared in the late 1860s.

The initial distribution of the White Stork was scattered, but at the beginning of the present century its numbers began to increase markedly (due to immigration from the south?). After 1910, there was a short decrease in the Baltic area, but the numbers increased again from 1915 (HOYNINGEN-HUENE 1910; FERSEN 1914; POLJAKOV 1915). In the late 1920s, White Storks began to breed for the first time on the territory of the present-day Rapla and Harju Districts in north Estonia, and in the late 1930s also in the Rakvere District (written communications from the correspondents of the Estonian Naturalists' Society). Thus the range in Estonia shifted considerably northward.

The first all-Estonian census of White Storks was taken in 1939. The breeding population was found to be about 320 pairs. Fifteen years later (in 1954) it was decided to take a regular

census every year. At that time the numbers were about the same as in 1939. Up to 1974, when the 3rd international census of White Storks was taken, 21 censuses had been made in Estonia (in addition to that of 1939).

Between the years 1954 and 1974 the numbers of breeding White Storks increased roughly 3.3-fold (from 320 to 1060 pairs). According to a written communication from M. MESHKOV, a similar considerable rise in the numbers of the White Stork has occurred in the Pskov Region of the R.S.F.S.R., south-east of Estonia. In 1958, there had been about 400 pairs; by 1974, the numbers had risen to 1218 pairs. The Pskov Region represents the north-eastern boundary of the range of the White Stork.

In Latvia, on the other hand, according to a written communication of M. JANAUS, in 1974 the numbers of White Storks had decreased by about 1000 pairs compared with 1934 and by about 360 pairs compared with 1858. According to a statement by T. STRAUTZELS, there were 6750 breeding pairs of White Storks in Latvia in 1934, while according to Z. SPURIS there were 6125 nesting pairs in 1958. The decrease was most marked in the western districts of Latvia, where the breeding population had been reduced by 19.7 %, locally by up to 40.3 %, compared with 1958. On the other hand, in the northern district of Latvia the numbers of nesting pairs had increased, in some of the northernmost districts by as much as 35 % compared with 1958. In the opinion of the Latvian ornithologists J. VIKSNE and M. JANAUS, the decrease of White Storks in the western part of Latvia was due to severe storms in 1967 and 1969, which tore down a large number of nests, some of which the local people did not restore. It is also possible that in 1974 some of the White Storks were

not covered by the census, probably chiefly those nests in which no young were reared. According to the investigation these pairs accounted for only 4 % of the total population, which seems a very low figure. For comparison's sake it may be mentioned that in Estonia the average number of White Storks not producing any offspring was 25 %, varying in individual years between 12.6 and 37 %. In various Central and Western European countries the proportion of White Storks not producing any offspring is still higher. In Estonia 19.9 % of the breeding pairs did not rear any offspring in 1974. In all probability the number of White Storks which did not rear any young in the current year (1976) may be roughly the same.

In Lithuania, the southernmost Soviet Baltic republic, the first country-wide census of White Storks was carried out in 1958. The number of breeding pairs was established as 7162 pairs. Ten years later, 1968, the second census yielded 6927 pairs. According to a written communication from V. SKUODIS, there were 6677 inhabited nests in 1974, which means that the number of nests had decreased by 6.8 % compared with 1958 and by 3.6 % compared with 1968. It should be noted that at the 1974 census 1991 empty nests were recorded in Lithuania and 406 in Latvia. These figures may have included some nests in which White Storks bred but did not succeed in rearing young. It may be that the numbers of White Storks in the total Baltic area are higher and more stable than the data of the 1974 census indicate. At any rate, in the northern part of the Baltic area (Estonia) and in the adjacent eastern area (the Pskov Region of the R.S.F.S.R.), the numbers of the White Stork have increased considerably.

As shown by the census taken in

Estonia over a period of 21 years, the numbers of the White Stork increased here in two ways. First, there is a smooth, gradual and almost unnoticeable increase. Secondly, in some years the population may increase abruptly, the number of new breeding pairs rising to a few hundreds. Such a sharp rise was observed only once in 21 years, namely in 1962. It may have been caused by immigration of numerous new pairs from densely inhabited areas. Aggression of the breeding birds towards late arriving individuals may force these to emigrate to the less densely inhabited boundaries of the range. Although in Lithuania the White Stork nests in colonies, and small colonies are known even in Latvia, the majority of the pairs are very aggressive towards other members of the species that try to settle down in the vicinity of an occupied nesting place.

Past censuses show that the rearing of local offspring has made a smaller contribution to the population increase in the Baltic area than the rare large-scale immigration of pairs from the south. Thus the number of pairs nesting in Estonia rose from 552 in 1961 to 807 in 1962. In this year of abrupt increase in population size, the weather conditions were not exceptionally favourable, the breeding period being cooler and rainier than usual, but it is possible that wintering was very successful. This conclusion was strengthened by comparison of the breeding results with the weather conditions in the Baltic area in other years.

Selostus: Kattohaikaran levinneisyyden muutoksista Baltiassa

Kattohaikara pesi ensi kertaa nykyisen Viron SNT:n alueella v. 1841. Pohjois-Viron ensimmäiset parit pesivät 1920-luvun lopulla. Ensimmäises-

sä varsinaisessa laskennassa v. 1939 pesivien parien määräksi arvioitiin noin 320. Vuodesta 1954 laskenta on järjestetty vuosittain. Kahdessa vuosikymmenessä pesimäkanta on yli kolminkertaistunut 320 parista (1954) 1060 pariin (1974). Kanta on myös kasvanut Pihkovan alueella Venäjän SNT:ssä (400 paria v. 1958, 1218 paria v. 1974). Latviassa pesimäkanta on sitä vastoin laskenut neljässä kymmenessä vuodessa noin tuhannella (6750 paria v. 1934). Erityisesti kanta on vähentynyt Länsi-Latviassa. Liettuassa pesiviä pareja laskettiin 7162 v. 1958, 6927 v. 1968 ja 6677 v. 1974.

Vuosittain keskimäärin 25 % (vaihteluväli 12.6 — 37 %) pareista ei Virossa tuota lainkaan poikasia. Populaatio on kasvanut yleensä jatkuvasti vähin erin, mutta poikkeusvuonna 1962 uusia pareja ilmaantui Viroon jopa satoja (255 uutta paria!). Vuoden 1962 hyppäksenomaista kasvua ei ole voitu selittää poikkeuksellisilla sääolosuhteilla; mahdollisesti syynä on ollut peräti menestyksekkäs talvehdinta.

References

- BESEKE, J. 1792. Beytrag zur Naturgeschichte der Vögel Kurlands. Mit gemalten Kupfern, nebst einem Anhang über die Augenkapseln der Vögel. Mitau und Leipzig, 12—92.
- BÜTTNER, G. F. 1858. Ankunft einiger Zugvögel in Kurland. — Naumannia VIII:352—254.
- FERSEN, A. V. 1912. Einiges über unsere Raubvögel. — Neue Baltische Waidmannsblätter VIII:16:362—365.
- FISCHER, J. B. 1791. Versuch einer Naturgeschichte von Livland. Königsberg, XXIV, 826 S., 4 T.
- HUECK, A. 1845. Darstellung der landwirtschaftlichen Verhältnisse in Esth-, Liv- und Curland. Leipzig, 340 S.
- HUMMEL, A. 1855. Ornithologische Mitteilungen aus Kurland. — Naumannia V:321—327.
- MEYER, B. 1815. Kurze Beschreibung der Vögel Liv- und Estlands. Mit einem Kupfertafel. Bei Johann Leonhard Schrag. Nürnberg, XXIV: 1—282.
- POLJAKOV, 1915. Woina i ptizy. — Ornitolog. Vestnik, 3:254—255.
- RUSSOV, V. 1874. Ueber die Zunahme der Vogelfauna in Liv-, Est- und Curland. Vortrag, gehalten in der Sitzung der Dorpater Naturforschergesellschaft am 23. Februar 1870. — Sitzungsberichte der Nat. Ges. zu Dorpat, III:143—146.
- 1880. Die Ornithologie Liv-, Est- und Curlands mit besonderer Berücksichtigung der Zug- und Brutverhältnisse. Nach dem Tode des Verf. herausgegeben von Th. Pleske. Archiv für die Naturkunde Liv-, Est- und Kurlands, IX: 214 S.