

**Radar and visual observations of sea duck's mass  
spring migrations in the west Estonia and  
the transmission of birdtam from Tallim airport  
to Helsinki-Vantaa Airport**

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RADAR AND VISUAL OBSERVATIONS OF SEA DUCK'S MASS  
SPRING MIGRATIONS IN THE WEST ESTONIA AND THE  
TRANSMISSION OF BIRDTAM FROM TALLIN AIRPORT TO  
HELSINKI-VANTAA AIRPORT.

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Summary

Radar and visual observation of the mass spring migration of three species sea ducks show, that about 300 thousands this birds in period 15-30 May flies in West Estonia by the next ways; 1. Along West Estonian coast 2. Toward north-east, crossing the land only in tail wind and on big altitude. There are transmission BIRDTAM between airports Tallin and Helsinki-Vantaa. There are recommendation of International Conference Baltic Birds-5 to spread BIRDTAM and to include other countries and other bird species.

As the result of many years visual observations over the mass spring migration of mainly three species of sea ducks (Clangula hyemalis, Melanitta nigra, Melanitta fusca) at Muhu-vain strait from the Puhtu ornithological station - it was ascertained that here up to 300 thousands sea ducks are migrating by waves each year toward the north and north-north-west along Western Estonia sea coast. Migration is taking place during 15-30 May between 19 o'clock and midnight. Migration proceeded at low altitude under head and head-side winds and at high altitude under tail wind. Simultaneous visual observations of migrations at Puhtu and at north-western extremity of Estonia (Pyezaspea cape) have shown that the numbers of migration in this last place is considerably lower than in the first place. This could happen as a result of sea ducks migration over a land but not alongside the sea coast. Radar observation have confirmed the migration of sea ducks over a land toward the north-east from the western to the northern seacoast of Estonia under south-western and western winds. The flight over a land has proceeded by comparatively wide front (20-30 km.). The climbing of altitude and the start of flight over land has been noted more often before the sunset. When flying out to sea after having crossed a land the altitude of flight is decreasing sharply and at 30 km distance from the seacoast sea ducks are coming out of the radar sight.

In such a way, by forecasting wind direction it is possible to predict the time, place, direction and altitude of the sea-duck migration.

On the basis of radar and visual observation mentioned above, and according to recommendation of Moscow and Rome meetings of Bird Strike Committee Europe in 1986-1987 the notification, similar to storm one, was transmitted by coded telegrams (BIRDTAM) about sea-duck migrations within 15-30 May period from airport Tallin to airport Helsinki-Vantaa. In the autumn the BIRDTAM was transmitted in reverse direction.

11-13.XI.1987 the soviet and finnish aviation experts and ornithologists discussed the course of these works execution. They admitted the desirability to continue them and to modernize the code of telegram transmission by increasing the number of bird species: in addition to mentioned above also Branta bernicla, Branta leucopsis, Anser albifrons, Grus grus and by changing some other details of Birdtam telegram. At present time we are trying to expand Birdtam by sending information to Finland about the start of mass autumn sea duck migration from the White Sea. The recommendation of the International Conference Baltic birds-5 (Riga, October 1987) provide for to expand BIRDTAM about sea-duck in the spring and in the autumn by including Poland, East and West Germany, Denmark and about geese and cranes migration to add Sweden to these countries.

This cooperation will help to disclose such regularities of bird migration which will make it possible to predict them more accurately and before longer time.

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