Avifauna of the islands in the southern part of the Gulf of Finland

OLAV RENNO

RENNO, O. [Institute of Zoology and Botany, Academy of Sciences of the Estonian S.S.R., SU-202400 Tartu, 21 Vanemuise Street] 1976. — *Avifauna of the islands in the southern part of the Gulf of Finland.* Ornis Fenn. **53:** 128—131.

The bird fauna of 112 islands in the southern part of the Gulf of Finland was studied in 1971—1975. The islands accommodate 85 breeding species, including 58 species of waterfowl and shore and meadow birds. The total number of breeding pairs was 41 600. According to the environmental conditions, the islands studied fall into 5 basic types. Of these, the offshore islands surrounded by deep water had the densest population, up to 2850 pairs/ha The last few decades have seen an increase in the numbers of gulls and of *Somateria mollissima, Aythya fuligula, Podiceps cristatus* and *Fulica atra.*

The first information about the bird fauna of the islands in the southern part of the Gulf of Finland was published in 1873 (V. RUSSOW). In 1937, N. Mikelsaar collected more detailed data concerning 18 islands east of Tallinn. He observed 120 bird species, including 30 to 32 species of treeless habitats. Since 1967, the islands lying in the bays of Kolga and Eru have been investigated by several amateur ornithologists of Tallinn, who discovered the nesting of great gulls, and of the Common Eider *(Somateria mollissima),* Wigeon *(Anas penelope)* and Scaup *(Aythya marila).*

Every June during the years 1971—1975 the bird fauna of the islands in the Gulf of Finland was studied intensively by teams led by the author. The studies covered altogether 112 islands, islets and reefs lying between the islands of Osmussaar and Lavansaar; 95 of these islands lie in the waters of the Estonian S.S.R. and 17 in the waters of the Leningrad Region. As a result, 85 species of breeding birds, including 58 species of shore birds and of other birds of treeless habitats, were discovered on these islands. Excluding woodland birds, the total number amounts to about 41 600 pairs (Appendix).

The ecological factors influencing the numbers of birds breeding on the individual islands include the relief, the type of vegetation, the depth of the surrounding water, the degree of isolation, the frequency of human visits and the presence of predatory mammals. These factors especially influence the numbers of ducks, gulls and terns. With respect to these conditions the islands studied may be divided into 5 basic types, some of which contain subtypes.

(0) Type 0 is represented by what 30 to 50 years ago were separate islands but now, owing to land upheaval, are separated from the mainland only when the water-level is exceptionally high. Breeding birds are sparse and represent a transformation or reduction

of the avifauna of the next type of island (1), obviously mainly under pressure from predatory mammals. Twenty bird species have been found breeding on type 0. Relatively numerous among them are the Arctic Tern *(Sterna paradisaea)* and the Common Gull *(Larus canus).*

(1) Type 1 consists of smallish islands, separated from the mainland by water 1 m deep. The islands of this type afford breeding sites for birds of 26 species. The population density is very high — averaging from 650 to 700 pairs/ha; 935 pairs/ha were found breeding on the Island of Pandju in 1973. Characteristic breeders are the Black-headed Gull *(Larus ridibundus),* nesting in colonies of up to 1100 pairs, Common Tern *(Sterna hirundo)* and Arctic Tern, Common Gull, Ringed Plover *(Charadrius hiaticula),* Oystercatcher *(Haematopus ostralegus),* Redshank *(Tringa totanus),* Tufted Duck *(Aythya fuligula)* and Shoveler *(Anas clypeata).*

(2) Type 2 consists of islands with a surface area of 2 ha, separated from the coast by a stretch of water 1 to 3 m deep. In all, 30 to 31 species of birds were established to breed on these islands. They boast the highest population density — up to 2850 pairs/ha; even if the most numerous species, the Black-headed Gull, were excluded, there would still be locally over 750 pairs/ha. The common breeders include the Common Gull, Common and Arctic Terns, Tufted Duck and in places the Scaup, Great Black-backed Gull *(Larus marinus)* and Herring Gull *(Larus argentatus).*

(3) The third type includes marine islands lying 1 to 3 km from the coast in deep water. Some of them (a) are of medium size, 1 sq.km in area, while others (b) are small, less than 2 ha in area. Many islands of this type are flanked by islets or reefs (subtype c). In all, 51 species bred on islands of this type, 49 on subtype (a), 34 on subtype (b) and 23 on subtype (c). The most numerous breeder is the Black-headed Gull. Next comes the Common Eider, with population densities on a few islands in Kolga Bay reaching 50 pairs/ha. Among the common breeders are the Common and Herring Gulls, the Tufted Duck, and the Arctic and Common Terns (the former being more numerous); less numerous breeders are the Great Black-backed Gull, Turnstone *(Arenaria interpres),* Redshank, Oystercatcher and Ringed Plover. Dabbling ducks, chiefly Shoveler, Mallard *(Anas platyrhynchos)* and Pintail *(A. acuta),* occur in very small numbers.

(4) The fourth type is represented by islands lying in the open sea, over 3 km from the coast. On the larger (a) of these islands (area 10 ha or more) are found 48 species of breeding birds, on smaller (b) ones (area less than 10 ha) 28 species, in all making up 51 species of waterfowl and shore birds. The larger islands have a varied landscape, and also afford breeding sites for about a score of woodland bird species. Among the shorebirds the predominant species is the Herring Gull; on Ukhtju Island the Herring Gull and Lesser Black-backed Gull *(Larus fuscus);* west of Juminda Peninsula these two gulls and the Common Eider. On the island of Little Tütarsaar the Lesser Black-backed Gull is the predominant species (715 pairs in 1972). There are very few large colonies of Arctic or Common Terns. These are more numerous on the small islands in the eastern part of the Gulf of Finland. On uninhabited islands of medium size the population density may amount to 75 pairs/ha. On large islands, however, only 3 to 5 pairs/ha and on small islands (with

an area of less than 2 ha) up to 200 pairs/ha may be found.

In the course of the last hundred years, the numbers of Anseriformes have decreased. In the 1970s, the Grey Lag Goose *(Anser anser)* was not found among the breeders. The Shelduck *(Tadorna tadorna)* now breeds only occasionally. The dabbling ducks have also become less numerous, particularly the Garganey *(Anas querquedula)* and Teal *(Anas crecca)*. However, the Wigeon has begun to nest in the area. The Tufted Duck breeds today in large numbers, particularly in the neighbourhood of Kurgola. The Scaup was not recorded as breeding before 1940; at present it is widespread and its numbers seem to be increasing. In the last century as many as 50 (100?) pairs of the Common Eider were found breeding, chiefly west of Tallinn; before 1940, this species was also distributed on the islands of Kolga Bay, its numbers in the Estonian part of the Gulf of Finland being 10 to 15. Thereafter, probably beginning with 1955, the population has increased rapidly and expanded eastwards as far as Little Tütarsaar. In the previous century, the Velvet Scoter *(Melanitta fusca)* and Red-breasted Merganser *(Mergus serrator)* were more numerous than they are today. The Coot *(Fulica atra)* was found breeding for the first time in 1972. The numbers of the Great Crested Grebe *(Podiceps cristatus)* have increased considerably.

The numbers of waders and terns are gradually decreasing. A newcomer in the southern part of the Gulf of Finland is the Caspian Tern *(Hydroprogne caspia)*, 3 pairs of which were found between Kurgola and Lavansaar.

The numbers of all gull species have risen compared with 1937. The Black-headed Gull now forms colonies of unprecedented size, 4000 to 6000 pairs. The Lesser Black-backed Gull, which used to be sparse, is now found on 17 islands, the total number of breeding pairs approaching 1300. The numbers of the Herring Gull have increased rapidly and now exceed 2100 pairs.

In the eastern part of the Gulf of Finland the following species have not been noted to breed: the Shelduck, Mute Swan *(Cygnus olor)*, Black Guillemot *(Cepphus grylle)*, Pintail, Coot, Lapwing *(Vanellus vanellus)*, Curlew *(Numenius arquata)*, Common Snipe *(Gallinago gallinago)* and Little Tern *(Stella albifrons)*. The following species have been seen in small numbers: The Oystercatcher, Gadwall *(Anas strepera)*, Blue-headed Wagtail *(Motacilla f. flava)*, Reed-Warbler *(Acrocephalus scirpaceus)* and Reed Bunting *(Emberiza schoeniclus)*. Only the first of these occurs in the western part of the Gulf as a common breeder. On the North Estonian islands the following species are very sparse: the Pochard *(Aytyhya ferina)*, Common Sandpiper *(Tringa hypoleucos)*, Little Plover *(Charadrius dubius)* and Great Reed-Warbler *(Acrocephalus arundinaceus)*. The last-mentioned species breeds primarily in inland waters.

Selostus: Suomenlahden eteläran-nikon saaristolinnusto

Vuosina 1971—1975 on laskettu 112 saaren pesimälinnusto Suomenlahden etelärannikolla Osmussaaren ja Lavansaaren välillä. Laskennoissa on todettu 85 lajia, metsälajit poislukien 41 600 paria. Liitteessä on esitetty tärkeimpien lajien kannan suuruus Viron SNT:n alueella olevilla 95 saarella ja Leningradin alueella olevilla 17 saarella. Lisäksi on annettu parimäärä koko tutkimussaaristossa sekä pesimäsaarien lukumäärä.

Tietyn saaren linnustoon — erityisesti sorsiin, lokkeihin ja tiiroihin — vaikuttavat pinnanmuodostus, kasvillisuus, ympäröivien merialueiden syvyys, saaren eristyneisyys, kävijöiden määrä sekä nisäkäspetojen määrä. Saaret on jaettu viiteen päätyyppiin ekologisten ja maisemallisten seikko-

jen perusteella. (0) Vain korkean veden aikana erilliset rantasaaret. 20 lajia, tiheydet alhaisia ilmeisesti nisäkäspetojen vuoksi. Valtalajeina lapintiira ja kalalokki. (1) Pienet rannikkosaaret, joita erottaa mantereesta metrin syvä salmi. 26 lajia, 650—700, jopa 935 paria/ha; tunnuslajeina naurulokki (jopa 1100 paria yhdellä saarella), kala- ja lapintiira, kalalokki, tylli, meriharakka, punajalkaviklo, tukkasotka ja lapasorsa. (2) Parin ha:n rannikkosaaret, joita erottaa mantereesta 1—3 m syvä salmi. 30—31 lajia, jopa 2850 paria/ha. Naurulokki on runsain (huipputiheydet ilman sitä 750 paria/ha). Muita tunnuslajeja kalalokki, kala- ja lapintiira, tukkasotka, paikoin lapasotka, merilokki ja harmaalokki. (3) Mereiset saaret 1—3 km päässä mantereesta. 51 lajia; tunnuslajeina naurulokki, haahka (huipputiheydet 50 paria/ha), kala- ja harmaalokki, tukkasotka, kala- ja lapintiira. Puolisukeltajasorsat harvalukuisia. (4) Avomeren saaret, yli 3 km:n päässä mantereesta. 51 lajia ilman metsälajeja. Valtalaji harmaalokki. Muita tunnuslajeja selkälokki (suurin kolonia 715 paria), haahka, kala- ja lapintiira.

Viimeisen sadan vuoden aikana esim. merihanhen, heinätavin, tavin, pilkkasiiven ja tukkakoskelon sekä kahlaajien ja tiirojen määrät ovat huvenneet. Haapana, nokikana ja räyskä ovat uusia pesijöitä. Tukkasotka, lapasotka, haahka ja silkkiuikku ovat runsastuneet, kuten myös lokit.

References

Russow, V. 1874. Bericht über Ergebnisse einer zoologischen Reise durch Liv- und Estland im Frühjahre 1873. Sitzungsperichte der Naturforsher-Gesellschaft zu Dorpat, 3,5: 401—418.

Appendix. Numbers of some bird species in the breeding season on islands in the southern part of the Gulf of Finland 1971—1975.

Species	Number of breeding pairs on the islands			Number of breeding islands
	Estonian S.S.R.	Leningrad Region	Total	
1	2	3	4	5
Podiceps cristatus	75	55	130	12
Anas platyrhynchos	43	7	50	19
Anas penelope	5	10	15	8
Anas clypeata	35	17—20	55	18
Aythya fuligula	430	570	1000	53
Aythya marila	70	5	75	14
Somat. mollissima	915	10	925	24
Melanitta fusca	190	22	215	38
Mergus serrator	50	20	70	24
Mergus merganser	50	50	100	21
Fulica atra	6	0	6	3
Haemat. ostralegus	80	6	85	35
Charadrius hiaticula	135	8	145	32
Vanellus vanellus	65	0	65	8
Arenaria interpres	70	22	90	39
Tringa totanus	175	15	190	53
Larus ridibundus	16 000	9000	25 000	38
Larus fuscus	420	865	1285	17
Larus argentatus	1625	455	2080	38
Larus marinus	65	25	90	34
Larus canus	2350	760	3100	87
Sterna hirundo	2400	1500	3900	74
Sterna paradisaea	2440	820	3250	87
Corvus corone	15	6	25	18
Sterna albifrons	90	0	90	16
Motacilla alba	55	5	60	28