

Monitoring and population changes of Red-throated Divers in Iceland

Aevar Petersen¹, Guðmundur Ö. Benediktsson², and Ib K. Petersen³

¹Brautarland 2, 108 Reykjavik, Iceland; aevar@nett.is

²Duggugerði 1, 670 Kópasker, Iceland; goben@simnet.is

³Dept. of Bioscience, Aarhus University, Denmark; ikp@dmu.dk

Present population estimate for the Icelandic Red-throated Diver population is 1000-2000 breeding pairs. This has not altered since the first such estimate in 1975, due to lack of sufficiently detailed distributional and numerical data for the country as a whole. Regional surveys have been carried out but not to the degree that warrants modification of the estimate.

Correspondingly little concrete information has existed until in recent years on population changes in breeding Red-throated Divers in Iceland due to lack of monitoring efforts. Only one large area with reasonable numbers of pairs was sufficiently well censused in the past to allow meaningful comparison with present breeding numbers. Repeated censuses in a 30 km² study area at Mýrar (W-Iceland) with 83 breeding pairs in 1978, showed a serious decline up to near 50% in 2007-2012. Monitoring efforts have also revealed changes in non-breeding numbers, breeding distribution, and productivity.

Three potential reasons can be recognized for the observed decline in breeding numbers between study periods; (1) general population decline, (2) abandonment of study area, and/or (3) non-breeding. The main factors, which are believed to have influenced these changes, are drainage of wetlands, predation, aggression from Great Northern Divers, and food shortage.

In 2012 a comparison was made between the Mýrar study area and Núpasveit/Vestur-Sléttá (NE-Iceland). These areas had about equal number of pairs (50-60 pairs) but the monitoring results were totally different. Comparison of population changes could also be made with 2008 at both study areas. While the breeding population increased by 20% since 2008 in the north a 42% decline was found in W-Iceland. In 2012 over 50% of territorial pairs were non-breeders at Mýrar but only 11% in the north. Productivity in 2012 was four times better (1,2 chicks/pair) in the north than the west (0,3 chicks/pair).

The most important factors governing these results are believed to be the food situation and Arctic Fox predation. Primary food in W-Iceland was sandeels (Ammodytidae), but the stock has been poor during the past decade or so affecting several seabird species as well as Red-throated Divers. At the Núpasveit/Vestur-Sléttá study area the main food was Capelin and cod species. Fox predation seriously impacted breeding at Mýrar, while no effect was apparent in the north.