

## **Breeding success and habitat selection of Red Phalaropes *Phalaropus fulicarius* and Red-necked Phalaropes *Ph. lobatus***

Yann Kolbeinsson<sup>1,2\*</sup> & Arnthor Gardarsson<sup>2</sup>

<sup>1</sup>South Iceland Institute of Natural History

<sup>2</sup>Department of Biology, University of Iceland

\* e-mail: yannk@hi.is

The Red and Red-necked Phalarope are two species of shorebirds that live mostly on water, at sea or on freshwaters. Both species are circumpolar and breed mainly north of timberline. The Red Phalarope is found at higher latitudes and is widespread in coastal tundras of Siberia, Alaska and Canada. Both species show reversed sexual dimorphism, females being larger while the male alone incubates and broods the young. The Red-necked Phalarope, with an estimated population of 50.000 pairs, is found in wetlands from sea-level into the highlands. Iceland is on the southern limit of the distribution of Red Phalaropes which has always been scarce and limited to coastal breeding sites. A total of 250 individuals were counted in summer 2005.

The aim of this project is to find criteria describing habitat selection of the Red and Red-necked Phalaropes within one study site, in order to prevent possible destruction of optimal breeding sites for the Red Phalarope and hopefully bring about protection measures as the species is red-listed in Iceland. Observations will be conducted in order to see if the breeding success varies between species within one study site. These studies will also provide a basis for future monitoring of both phalarope species in Iceland, both of which seem to have decreased in recent decades although no studies have been made to verify this.

This project started in 2005 and will continue into 2006. The study site is a stronghold for the Icelandic population of Red Phalaropes and also supports breeding Red-necked Phalaropes offering a good opportunity to compare species. A preliminary study was made in 2004.

Breeding success is estimated by locating nests of both species and monitoring them on a regular basis until hatching. Red Phalaropes were colour-ringed during 2005 to get a better idea of their breeding biology. More birds will be colour-ringed in 2006, while radio telemetry will also be used on up to ten males to get more information on breeding success. Fledging success is estimated by counting on transects during the brood period, noting the behaviour of males and counting young if located.

The feeding habitat of both species is studied by sampling invertebrates in the water or just above ground level where phalaropes are seen feeding. The results will be compared with random samples taken on sites within the study area. Nest habitat is described and compared if possible.

First results show that the Red Phalaropes attempt to breed in the study area but some conditions in the area seem to have negative effects on their breeding success. At the same period the behaviour of Red-necked Phalaropes suggests that their breeding success is higher. More detailed research will take place in 2006 to study the difference between species and if the biased sex ratio has an effect, but ca 70% of the Red Phalaropes were males, while this ratio was around 50% for the Red-necked Phalarope.