Project Update: December 2010

Analysis of the spatial distribution of *Otaria flavescens* in Chile revealed the presence of three distribution centres: north of ~30°S, ~30°S-50°S, and south of 50°S, with significant spatial aggregation of breeding colonies and progressive decline with distance of colonies and individuals' abundance from the biggest colonies. These results suggest the existence of three metapopulations and progressive expansion of the species.

We evaluated the effect of net primary productivity (NPP) on the spatial distribution of the species, finding a positive effect, but not linear, with higher probability of breeding colonies' settlement in areas with high NPP.

We took samples of 260 individuals from 22 colonies along Chile, by a remote biopsy system. Preliminary genetic analysis from 30 individuals in 8 colonies, determined the presence of a genetic sub-population in northern Chile (23°15'S-20°50'S) and another in the south (south 42°S), suggesting genetic differentiation between northern and southern populations.

Left: female sea lion getting a biopsy dart, north Chile. Right: small sea lion harem in a reproductive colony of southern Chile.