

## キタゾウアザラシのメスの採餌回遊における餌遭遇率と採餌努力量

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Prey encounter rates and foraging effort of female northern elephant seals during oceanic migrations.

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Northern elephant seals move great distances during their biannual foraging migration. Female seals are at sea for 75 and 219 days and reach the maximum distance of 2140 and 3256 km from the rookery on average, for post-breeding and post-molt migrations, respectively. It has been suggested that the extra cost of long distance travel is offset by higher prey concentration at the distant foraging grounds. However, the relationship between prey encounter rate and foraging distance from the rookery has not been quantified. We examined the migratory movement and prey encounter rate of female northern elephant seals. We used jaw accelerometer to counted the number of jaw motion events as an index of prey encounter events. We also used satellite tag to determine daily position of the seal. We obtained the data from 25 seals for post-breeding and 15 seals for post-molt migrations. Daily prey encounter rates were highly variable during the course of outward travel, but increased significantly with distance from the rookery up to 1000km, during both post-breeding and post-molt migrations. Seals accumulate a greater amount of time at the bottom of the dive each day during the post-breeding than post-molt migration. These results suggest that seals gain the benefit of high prey encounter rate by long distance travel up to 1000km while they modify their foraging effort to fit with the different time constraint of short post-breeding versus long post-molt migrations.