

Preassessment Data Report #6

Detection probabilities for bird carcasses on beaches of Unalaska Island, Alaska,
following the wreck of the M/V *Selendang Ayu*

COMMENTS OF THE RESPONSIBLE PARTY

Page 3; Paragraph 1; Abstract

“The relatively low detection probability and extremely low persistence rates (Byrd and Reynolds 2006b) suggest that only a very small proportion of all deposited carcasses were counted during beach searches on Unalaska Island.”

Delete “*extremely*”
Replace “*suggest*” with “*indicate*”
Delete “*very*”

Page 4; Paragraph 1; Study Design

“A sample of five beach segments was selected for the carcass detection study: two exposed, one catchment, and two protected.”

The sample size, in terms of number of study beaches, is small. The authors do not mention whether or not the five beaches were a random selection from the population of all beaches in the oil spill area (with perhaps the exception of non-accessible coast). Further, due to low detection, catchment and protected beach types were pooled creating two beach classifications with three beaches in the former and two beaches in the latter group—the number of exposed beaches in the sample is underrepresented relative to the proportion of exposed beaches in the population within the oil spill area. As such, this might limit the extensibility of the persistence rate over the range of the oil spill area.

Page 4; Paragraph 3; Study Design

No description of the bird carcasses is provided. Presumably the carcasses were, as in the study conducted in Chernofski, only partial remains and not entire, intact carcasses.

Page 5; Paragraph 4; Results

“Models P..p and P.tp were identified as the best (Table 1), demonstrating detection systematically varied with pass and among teams. Not surprisingly, detection probability increased on the second pass, roughly from 40% to 70% (Table 2, Figure 1).”

The 40% detection probability for a single pass by the searchers closely corresponds to the 39% detection probability of the Chernofski study where searchers made only a single pass.

It may be appropriate to apply the 70% detection probability derived after the searchers made a second pass, if either the Tiglax or SCAT crews, after searching a stretch of beach, searched it again on their return to their departure point from the beach, especially if the departure point was near the original start point of the search.

Page 5; Paragraph 5: Discussion

“This was also observed in the only other oil spill study to directly estimate carcass detection probability (Fowler and Flint 1997). “

For clarity, replace this sentence with the following:

This was also observed in the only other oil spill study to estimate carcass detection probability by searching for naturally deposited carcasses in a spill zone (Fowler and Flint, 1997).

Page 6; Paragraph 2; Discussion

The authors noted that based on an analysis of nine possible models, the estimated detection probability did not vary significantly across beach type—this does not mean that detection probabilities do not vary by beach type, merely there was no beach effect given the available data. Since the number of detections was low it’s hard to know; there could still be a significant beach effect that would result in different detection probabilities by beach type. This could impact final estimates for number of affected birds depending on how different the estimated detection rates were and how many km of each beach type fall in the oil spill area.

Page 6; Paragraph 3; Conclusions and Recommendations

“The relatively low detection probabilities and extremely low persistence rates (Byrd and Reynolds 2006b) suggest that only a very small proportion of all carcasses would be counted during beach searches on Unalaska Island.”

Delete “*extremely*”

Replace “*suggest*” with “*indicate*”