

Predation Control and Caging Notes from Breakout Session at Piping Plover Workshop

What are People Doing?-

Vince Cavalieri (Great Lakes)

-they cage all plover nests and practice extensive predation control (trap mammals and kill dogs and avian predators (even can kill some merlins, although they are state-listed)); problems with avian predators are the biggest struggle and similar to problems on the Atlantic Coast

-they have thought about not using cages, but the mortality of adult plover increases once avian predators such as crows and merlins figure out where the plovers are

-they started caging in '80's; hatching success rose from 30 something % to 90 something %

David Baasch and Mark Peyton (Platte)

-they do not cage as caging is not allowed; however, as habitat is static, predators become habituated; they do use 4 foot high predator fencing and trap for mammals such as mink, fox, skunks, and bobcats (at bigger sites); don't do anything that prevents avian predators

Duane Nelson (Colorado Plovers)

-every year they have different predators due to different water regimes

-most nests are caged; however, this is up to Duane's discretion

-coyotes and rodents are the chief predators in most years; can also have trouble with California gulls and bull snakes

-Use APHIS for coyote trapping (must go around Colorado Division of Wildlife to do this as they do not allow this) and disk uplands to get rid of burrows and apply rodenticide outside burrows to reduce rodent numbers

-Terns and plovers that select more vegetated sites tend to be more successful (less predator issues)

-Duane has successfully caged some tern nests

Jared Stirling (Missouri River)

-have been caging since early 1990's on river segments, and still do in most cases (with the exception of cases where the cages make the birds more susceptible to predators)

-don't cage in Montana (so few plovers), and only cage at big reservoirs where see problems (e.g., cages can be used for cattle enclosures at some of these reservoirs)

-dummy cages have been put out at the beginning of the season on occasion so that predators learn that cages are not necessarily associated with a meal

-there has not been funding for a Corps caging study on Missouri River yet

-Lewis and Clark Reservoir Delta area—mink and crows were the biggest nest predators in 2011; biggest chick predators in 2011—G. Horned owls

-N.D.—gull control was a huge issue in 2011; coyotes have been a problem in past years

Future (things to think about on the Missouri River): 1) Will caging even be possible with the larger bars created after the 2011 flood, 2) Will caging work with the implementation of a new monitoring program?, 3) May not have to cage when there is an abundance of habitat (only when there is static, less marginal habitat); 4) Will attached sandbars have greater predation problems? (Gene Bormann—Garrison has always had attached bars, and some of them were great nesting sites; many of them lasted longer and vegetated slower than ones on the Gavins Reach after '97 flood)

-After the 1997 flood, didn't see mammalian predators for several years

Suggestions—

Joy Felio—Cost/benefit analysis of caging: could money be spent in better ways?; most predator efforts should be aimed at protecting adults

Tom Buhl—Things to think about: There may be more chicks on ground with caging, but are more fledglings being produced?; what is the cost of losing adults due to caging? In places like the G. Lakes, where there are only 150-200 adults, losing an adult will really have an impact

Mark Peyton—use multiple trail cameras to document the predators; new cameras have faster trigger reaction times

Caging Consensus of the Group

-If can keep high quality habitat in areas such as the rivers, don't cage at all; in areas where the habitat is static such as the G. Lakes and Colorado, will need to keep caging

-Whether to continue caging depends upon the predator species that are the problems

Things to Consider

-May want to further examine whether there is higher abandonment for non-full clutches for MR plovers and other plovers that are not caged until the clutch is complete; the Corps typically waits until there is a full clutch before caging, unless severe predation issues necessitate caging earlier

-For the Atlantic Coast plovers, studies have shown that abandonment is not higher if caging takes place before the full clutch is complete

-There was a great difference in the size and structure of cages used by plover biologists; this should perhaps be discussed and looked into further to see what caging size and structure is best for each plover nesting area

-Other predator control options were discussed: Corps has used strobe lights in the past (this was distracting to terns returning to colonies), lasers and crackling shells were used to get rid of gulls and there was some success with these methods

Data Mining

-Corps data—mortality data is not tracked (have mortality reports, but not tied to individual nests; can't compare back to caged nests); however, could possibly figure out abandonment and mortality due to the caging of nests by analyzing the nest fate data collected at Corps nests; however, nest is normally visited several times before put down that nest unattended (abandoned)—this doesn't necessarily mean an adult was lost

-Did not really have a chance to discuss data mining options with the other plover data

-USGS may have caging data for Lake Sak that could be analyzed to determine the pros/cons of caging