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United States
Department of
Agriculture

Animal and Plant
Health Inspection
Service

Wildlife Services

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Dear Britta:

The summer session of the 2007 predator damage management was completed during May 14th-23rd. USDA-Wildlife Services removed 4 red fox (*Vulpes vulpes*), 3 gray fox (*Urocyon cinereoargenteus*), 3 raccoons (*Procyon lotor*), 3 Virginia opossums (*Didelphis virginiana*), and 15 free ranging cats (*Felis domesticus*). In addition to these predators, 2 nutrias (*Myocastor coypus*) were removed. A total of 30 target animals were taken from both Bodie and Ocracoke Islands (See Table 1).

Table 1. Foxes removed from Cape Hatteras National Seashore, May 2007.

	Species	Age/Sex	GPS Location	Island
1	Red Fox	Adult Female	N 35.83981 W 75.56120	Bodie
2	Red Fox	Adult Male	N 35.83580 W 75.55987	Bodie
3	Red Fox	Adult Male	N 35.79645 W 75.54048	Bodie
4	Red Fox	Juvenile Female	N 35.83852 W 75.56116	Bodie
5	Gray Fox	Adult Male	N 35.80351 W 75.54584	Bodie
6	Gray Fox	Adult Female	N 35.80334 W 75.54569	Bodie
7	Gray Fox	Adult Female	N 35.80351 W 75.54584	Bodie

There were a total of 151 animals removed by USDA-Wildlife Services from Bodie, Hatteras, and Ocracoke Islands during the two 10-day management sessions. The difference in the number of predators removed during the winter management session and the summer management session was significant (See Table 2). As stated in the previous letter, it is our experience that the winter months will be the most practical time to remove predators. Environmental conditions, limited food supply, and reproductive behavior make the winter months more conducive to productive trapping efforts. The summer session may still be necessary to remove any remaining animals or animals that move into the area following the winter trapping session.

Table 2. Animals removed on Cape Hatteras National Seashore during the first 6 months of calendar year 2007.

Session	Red Fox	Gray Fox	Raccoon	Opossum	Feral Cat	Nutria	Otter	Total Animals Removed
2007w	8	0	31	25	4	52	1	121
2007s	4	3	3	3	15	2	0	30
2007 Totals	12	3	34	28	19	54	1	151

A summary of the 2007 data indicates that an integrated damage management approach, including all available methods, is the best management practice when conducting predator removal efforts (See Table 3). We recommend that all methods including cage traps, foothold traps, snares, and conibears continue to be used during the predator damage management sessions at Cape Hatteras National Seashore.

Table 3. Methods used during the March and May 2007 predator management project at Cape Hatteras National Seashore.

Species	Methods Used			
	Cage	Foothold	Conibear	Snare
Red Fox	0	6	0	6
Gray Fox	0	2	0	1
Raccoon	15	5	13	1
Opossum	18	2	8	0
Feral Cat	18	1	0	0
Nutria	0	1	53	0
River Otter	0	0	1	0
Totals	51	17	75	8

This May was the first USDA-WS trapping session on Ocracoke Island. The majority of sign that we saw on Ocracoke belonged to feral cats. Therefore the majority of the time we spent on Ocracoke was directed at capturing these free ranging cats. We caught 13 cats on Ocracoke Island. As long as cat advocacy groups release cats on the island there will be continual problems with predation on the beaches. During our visit, we did not see mink sign anywhere on the island. Mink are small fast-moving animals that range large distances in the pursuit of food. Take into account the harsh environmental conditions plus the fluctuating tidal waters and it is understandable as to why it is difficult to locate and remove mink in just a matter of days. To complicate the trapping scenario, many of the locations that would be ideal mink setting locations are easily within eyesight of the public. For future visits in upcoming years, we recommend setting for mink during the winter months when the amount of people using the island is greatly reduced.

We recommend a new interagency agreement be initiated for FY 2008 for two additional 10 day trips. We are estimating it will cost approximately \$9,500 in FY 2008 for 2 full-time wildlife specialists or 200 hours for each 10 day visit assuming housing will still be available. Budgeting \$19,000 in FY 2008 will help ensure adequate funding will be available for predator damage management including a 10 day trip in March 2008 and another during the peak nesting season.

As you are aware, Cape Hatteras National Seashore is a very large area to cover during a short 10 day period. To meet the growing predator damage management demands and to be able to cover the entire area adequately over a given year, we could provide a full-time predator damage management technician year-round at a cost of \$85,000. We could also incorporate research on ghost crab management, exclusion methods, and cage trap efficiency with the National Wildlife Research Center if interested in a Wildlife Biologist grade level to conduct the research. We estimate the cost would be \$95,000 per year for the Wildlife Biologist level. Both positions would include salary, benefits, 4x4 truck, gas, supplies, equipment, supervision, administration etc. If you would like additional information on the potential research or would like to have a meeting to discuss details let us know. The relationship would be the same except you would have a USDA employee year round to help you manage your predator damage needs.

We enjoyed working with the NPS staff and hope that our efforts met your expectations. Feel free to contact us with any questions and we look forward to assisting you in the future.

Best regards,

Josh Biesecker
Senior Wildlife Specialist

Todd Menke
Assistant State Director