

2002 American Oystercatcher Monitoring-Cape Lookout National Seashore

Introduction

American Oystercatchers are common nesters throughout the park, primarily on the ocean beach. Their choice of nesting habitat makes them particularly vulnerable to disturbance by park visitors and off-road vehicles.

Monitoring of American Oystercatcher nesting success at Cape Lookout National Seashore (CALO) began in 1995. A researcher from Duke University studied nesting on South Core Banks and found low reproductive success. She also documented chick mortality caused by off-road vehicles. Since 1997 researchers from N. C. State University and park staff have conducted censuses, monitored nesting success and banded birds on North and South Core Banks.

Methods

Surveys of nesting habitat were conducted 2-6 times a week from early April to mid-July. When nests were located they were marked with a wood stake and given a number. The stakes were usually placed about 10 feet to the seaward side of the nest. The area around the nest was closed with “Bird Sanctuary” signs if the nest was in danger of being run over by off-road vehicles. Generally, nests found in the dunes were not posted. There was concern that predators might learn to associate posts with nests. Locations of the nests were recorded using a GPS and the park’s mile marker system. Information about the habitat type was also noted.

Nests were checked every few days to monitor the number of eggs present and hatch date. Chicks were monitored until they fledged or were lost.

Results

Nesting

A park-wide census was conducted in May. 49 nesting pairs were counted (Table 1). Counts were for pairs on or near the ocean beach and did not include marsh islands or soundside habitat.

Table 1. American Oystercatcher Census- May 2002

North Core Banks	23 pairs
Middle Core Banks	4 pairs
South Core Banks	19 pairs
Shackleford Banks	3 pairs

Nesting pairs were spread throughout most of the ocean beach habitat in the park (Figures 1& 2). The birds did not use areas adjacent to buildings and concentrations of people.

Hatch Success

90 nests were found of which 10 hatched at least one egg. Six chicks were known to survive to fledge (Table 2). The average clutch size was 2.4 eggs. Of the nests that failed, 40 were lost to predation, one was flooded, three nests were lost due to human disturbance and three were abandoned. One nest was lost after one of the adults was killed. 33 nests failed due to unknown causes. Raccoons were found to be the main predator but feral cats and ghost crabs also depredated nests. Individual nest data are found in Appendix 1a and 1b.

Table 2. Oystercatcher Nesting by Island 2002

Island	# pairs	#Nests	# Nests Hatched	# Chicks Fledged
North Core Banks	23	46	5	5
South Core Banks	22	44	5	1
Shackleford Banks	3	Unknown	Unknown	Unknown

Table 3. Summary of Oystercatcher Reproductive Success Data

Year	Island	#Nests	#Nests Hatched	#Chicks fledged
1995	SCB	36	10 (28%)	7
1997	SCB	34	4 (12%)	2
1998	NCB & SCB	98	12 (12%)	6
1999	NCB & SCB	114	16 (14%)	6
2000	NCB & SCB	75	25 (33%)	9
2001	NCB & SCB	109	19 (17%)	1
2002	NCB & SCB	90	10 (11%)	6

Banding

6 adult birds were trapped on the nest and banded. A green band or flag and a USFWS metal band were placed on the lower left leg. This was used as a unique marker of birds that nest in the park. One or two color bands were used in various combinations on the lower right leg to identify individuals. Banded adults were measured and weighed.

Seven chicks were also captured and banded. At least five of these chicks are believed to have survived to fledge. A list of band combinations used is found in Appendix 2.

Discussion

The hatch success of oystercatcher nests this year (11% of the nests had at least one egg hatch) was the lowest since monitoring began (Table 3). Productivity also continued to be poor with 42 pairs only known to fledge six chicks. Predators continued to be the biggest threat to nesting success, with flooding only a minor factor this season.

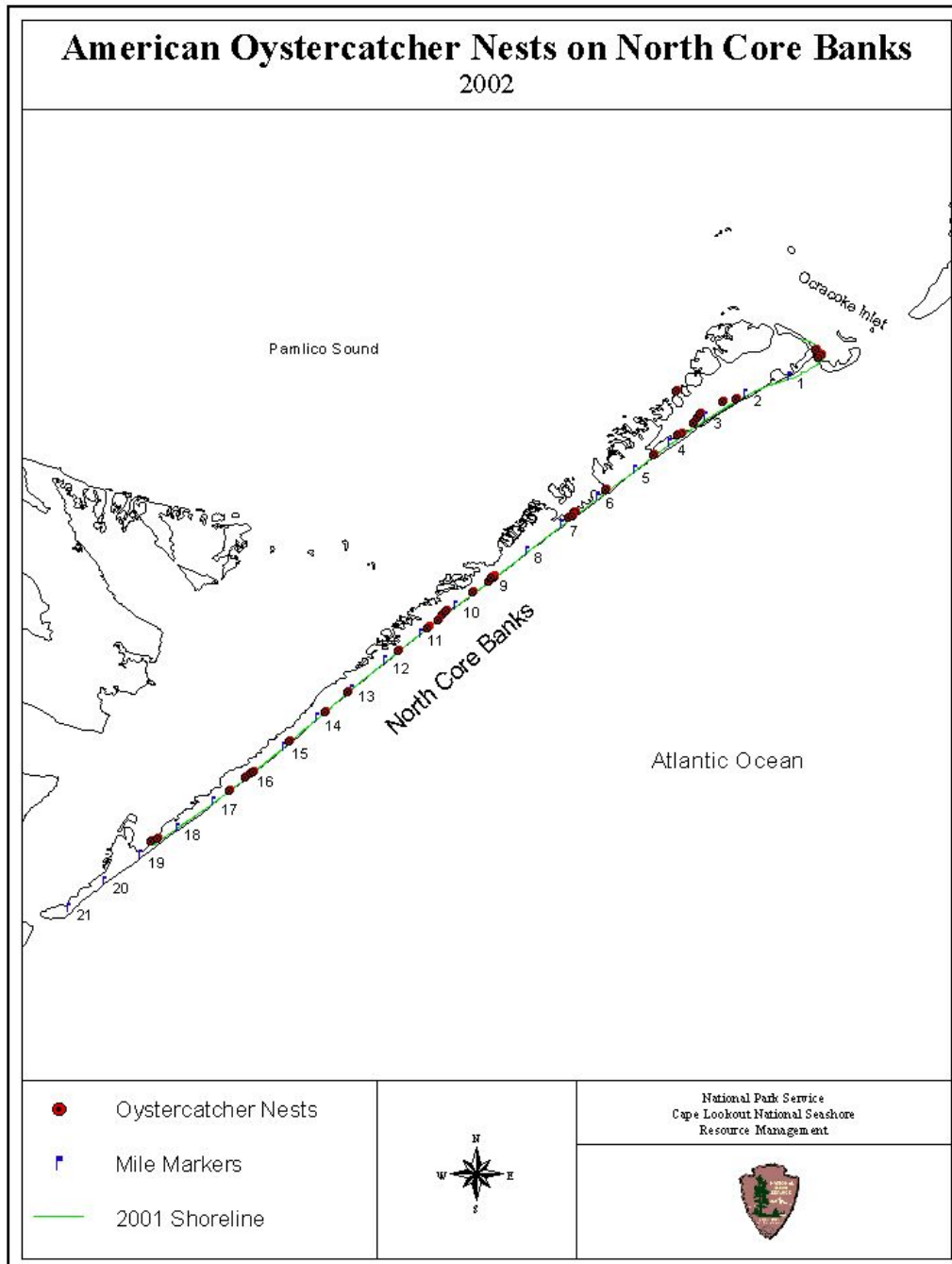
Direct human impacts on nesting success included a nest run over by a vehicle and a nest abandoned when a campsite was located too close to the nest. One nest on North Core Banks may have had the eggs removed by a visitor. Oystercatcher chicks were regularly found in vehicle tracks, although chick mortality was not observed this season.

The monitoring at Cape Lookout National seashore seems to confirm that American Oystercatchers have inherently low reproductive productivity. Despite this, the number of nesting pairs in the park has remained stable over the past five years.

Management Recommendations

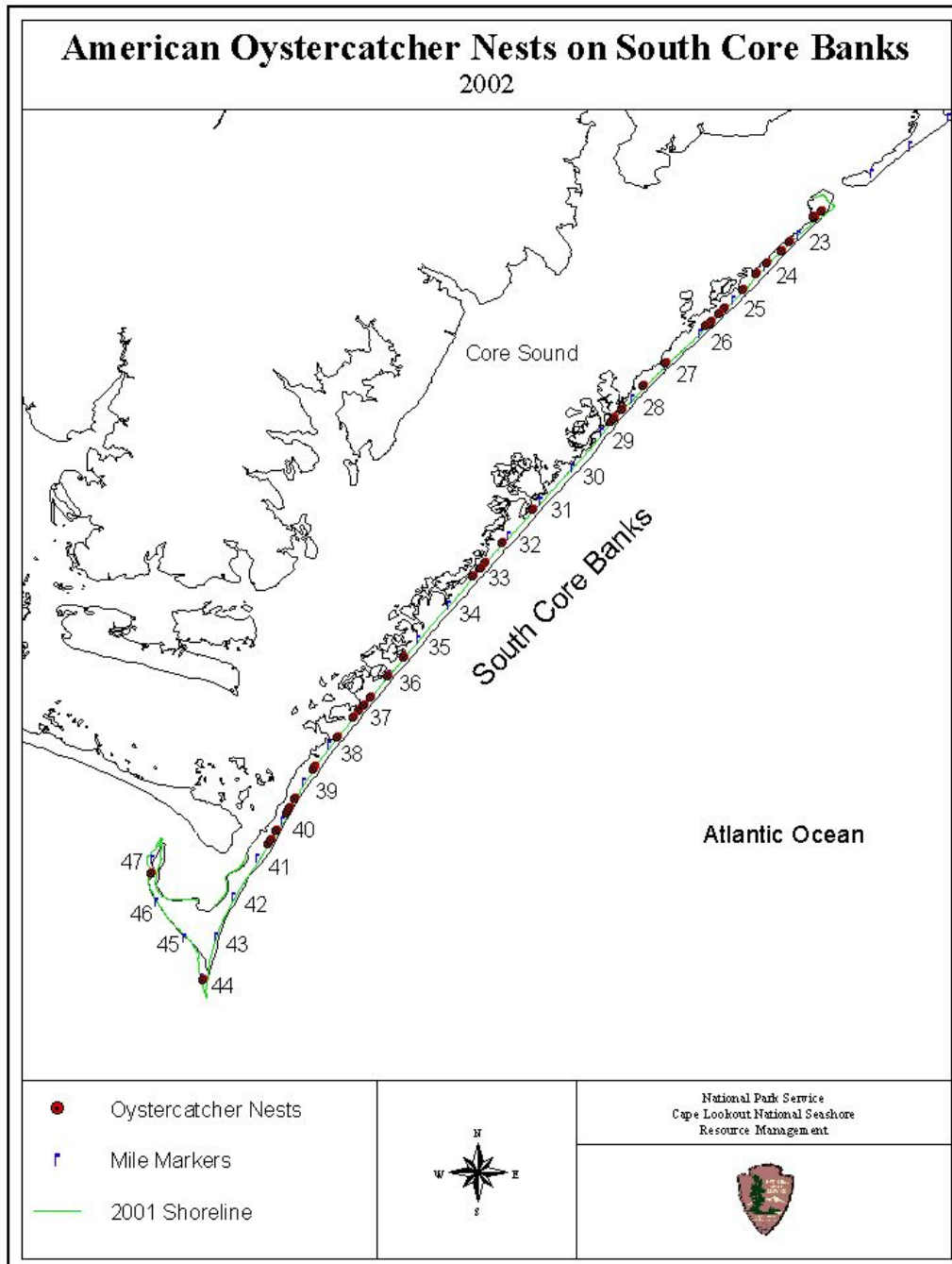
Monitoring should continue to document factors limiting nesting success of American Oystercatchers at CALO. It is unknown what level of productivity is necessary to maintain the population in the park. Observations of banded birds could provide vital information on survival rates and site fidelity of nesting birds. Efforts should continue to limit the impacts of off-road vehicles on nests and chicks.

Figure 1.



Plot date: October 8, 2002 c:\gk_data\oyst\k_roatole\enam_oy_2002.apr

Figure 2.



APPENDIX 1A AMERICAN OYSTERCATCHER NESTS- NORTH CORE BANKS-2002

#	MILE	LOCATION	FOUND	LOST	EGGS	COMMENTS
1	11.4	Beach Berm	4/17	4/19	2	Lost to Unknown Causes; Posted
2	16.3	on Beach 3m from dunes	4/19	4/23	2	Lost to Unknown Causes
3	10.3	top of Dune ridge	4/19	4/30	3	Lost to Raccoon predation
4	9.55	behind beach in blow out	4/19	7/15	3	Hatched 5/15; Fledged at least 2 chicks 7/15 R, GF/S, -, -/G and R, -/S, B, -/-
5	0	North Pt. Flats	4/19	4/24	1	Lost to Unknown Causes
6	10.5	Beach at Edge of Dunes	4/19	4/24	2	Parent Predated, headless carcass found 5ft from nest
7	5.85	Blow out area in dunes	4/20	7/1	3	Hatched 5/24, only one chick observed, one chick fledged on 7/1
8	9.1	Beach	4/20	4/21	2	Lost to Cat; Posted
9	2.6	Portsmith Flats	4/29	5/8	2	Lost to unknown Causes
10	6.28	K-J Flats North of Bird closure	4/29	5/15	3	Cat Predated 2 eggs third was cracked and left in nest
11	8.9	Big Blow out in Dunes	4/29	5/7	2	Found By Jeff and not seen again
12	3.7	Shell Mounds	4/30	5/9	3	Lost to Raccoon predation
13	3.4	Portsmith Flats	4/30	5/9	3	Lost to Raccoon predation
14	3.85	behind shelly mounds	5/1	5/12	3	Lost to Raccoon predation
15	15.9	Beach	5/7	5/16	2	Lost to Raccoon predation
16	14.85	beach	5/7	5/23	2	Lost to Unknown Causes
17	13.1	Beach Berm	5/7	5/12	3	Lost to Cat
18	8.3	small blow out between dues	5/7	5/9	2	lost to cat predation
19	6.7	K-J Flats	5/7	5/15	3	Lost to Unknown causes
20	4.5	Beach Blow out zone	5/7	5/16	3	lost to cat predation
21	3	Portsmith Flats	5/7	5/24	3	Lost to Unknown causes
22	6.5	Kathryn Jane Flats	5/7	5/12	3	Lost to Unknown Causes
23	0	Ocrakoke Inlet Flats	5/8	5/12	2	Lost to Raccoon predation
24	8.9	Blow out near Mile Marker 9	5/12	5/30	3	Ghost Crab
25	10.2	3m east of back rd.	5/12	6/20	3	Hatched 6/11, 2 chicks; lost by 6/20--unresponsive parents
26	18.6	small dune @ Old Drum inlet	5/15	5/30	2	Lost to Mammal Predation
27	10.8	On beach near ramp 10B	5/15	5/17	1	Abandoned
28	10.8	On Beach even closer to ramp 10B	5/17	5/24	1	Abandoned
29	6.5	Kathryn Jane Flats	5/23	6/4	3	lost to cat predation
30	3.4	Portsmith Flats	5/23	5/31	2	Lost to Unknown Causes
31	3.7	shelly mounds on beach	5/24	6/16	3	Mammal Predation
32	6.6	Kathryn Jane Flats	5/24	6/2	3	lost to cat predation
33	3.75	near dunes at back of flats	5/25	5/31	3	Lost to Raccoon predation
34	0	Ocrakoke Inlet Flats	5/25	5/30	1	Lost to Unknown causes

#	MILE	LOCATION	FOUND	LOST	EGGS	COMMENTS
35	15.8	Beach	5/30	6/16	3	lost to cat predation; posted
36	13.75	Beach Berm	5/30	6/6	2	lost to cat predation; posted
37	0	Ocrakoke Inlet Flats	5/30	6/20	2	Possible Human Theft. AMOY tracks and Human Tracks Visible, no evidence of other predators
38	2.2	edge of dunes on flats	5/31		2	Hatched 6/19, 2 chicks; banded R,GF/S,-,G/Y and -,GF/S,-,G/Y; 2 chicks fledged
39	15.2	blow out between dunes	6/1	6/20	2	Unknown mammal predation
40	3.05	Portsmith Flats	6/5	6/20	2	Lost to unknown causes
41	10.9	Beach Berm	6/5	6/20	2	Lost to Unknown Causes; Posted
42	18.4	near ramp 18B	6/13	6/21	2	Lost to Unknown Causes
43	9	in Dunes near large blow out	6/15	6/20	3	Raccoon predation
44	6.45	in front of dunes in flats	6/20	6/23	2	Lost to Raccoon predation
45	6.57	K-J Flats near K-J sign	6/26		1	Hatched, chick lost
46	16.5	on beach	7/3	7/8	1	Lost to unknown causes; possibly abandoned on 7/6

Total Nesting attempts: 46

hatched: 5

Causes of Failure:

Unknown 15

Mammals 21 (Raccoons=9, Cats=9)

Abandoned 2

Ghost Crab 1

Human Theft 1

Parent Predated 1

APPENDIX 1B AMERICAN OYSTERCATCHER NESTS- SOUTH CORE BANKS-2002

#	MILE	LOCATION	FOUND	EGGS	POSTED	Latitude	Longitude	COMMENTS
1	22.5	Berm in closure	18-Apr	2	N	34.84466	-76.32806	Lost 4/24
2	36.0	Beach berm	18-Apr	3	Y	34.68949	-76.47305	Lost 5/8
3	46.7	Flats in closure	18-Apr	3	N	34.62270	-76.55350	2 eggs hatched 5/15, chicks lost
4	40.6	Beach berm	22-Apr	3	N	34.63262	-76.51362	Lost to predation 5/8
5	38.6	Beach berm	22-Apr	3	Y	34.65847	-76.49796	Lost 4/30
6	37.7	Beach berm	22-Apr	3	N	34.66883	-76.49007	Lost 5/2
7	37.0	Beach berm	22-Apr	3	N	34.67779	-76.48276	Lost 5/17
8	32.2	Flats	24-Apr	3	N	34.73460	-76.43431	Lost 5/8
9	28.6	Beach berm	24-Apr	2	Y	34.77691	-76.39620	Lost to predation 4/30
10	23.9	Flats	24-Apr	4	N	34.82950	-76.34442	Lost to predation 5/8
11	23.3	Flats in closure	30-Apr	1	N	34.83686	-76.33673	Lost 5/10
12	27.6	Between dunes	30-Apr	3	N	34.78777	-76.38617	Lost 5/13, ATV tracks near nest
13	39.4	Beach berm	2-May	2	N	34.64783	-76.50472	Lost 5/6
14	39.8	Beach berm	3-May	3	Y	34.64288	-76.50736	Lost to predation 5/6
15	24.2	dune west of backroad	6-May	3	N	34.82585	-76.34765	Lost to predation 5/10
16	40.2	Beach berm	8-May	2	N	34.63691	-76.51085	2 eggs hatched 6/3, chicks lost
17	32.8	Beach berm	8-May	3	Y	34.72796	-76.44010	Lost to raccoon predation 5/17
18	22.3	Flats in closure	8-May	3	N	34.84691	-76.32568	Lost 5/13
19	28.7	Beach berm	8-May	3	Y	34.77568	-76.39718	Lost to predation by 5/21
20	44.0	Flats in closure	8-May	3	N	34.58650	-76.53604	2 eggs hatched 6/3, chicks lost
21	36.6	Between dunes	13-May	3	N	34.68213	-76.47896	Lost to predation 5/17
22	25.2	Beach berm	13-May	2	N	34.81402	-76.35858	Lost 5/24
23	25.7	Beach berm	21-May	3	Y	34.80890	-76.36371	Lost to raccoon predation 5/24
24	24.7	Between dunes	21-May	3	N	34.82043	-76.35239	Lost to raccoon predation 6/3
25	39.7	Beach berm	21-May	3	Y	34.64398	-76.50691	Lost 6/1
26	38.6	Beach berm	24-May	3	Y	34.65760	-76.49846	Lost to raccoon predation 6/5
27	35.5	Beach berm	24-May	2	Y	34.69574	-76.46752	Lost 6/1
28	31.2	Flats	24-May	3	N	34.74578	-76.42381	Lost 5/27
29	36.9	Beach berm	27-May	3	N	34.67947	-76.48110	2 eggs run over by ATV, 1 egg lost 6/19
30	33.1	Beach berm	27-May	1	N	34.72314	-76.44415	Lost 6/3
31	22.5	Flats in closure	27-May	2	N	34.84526	-76.32819	Lost 6/1
32	40.5	Beach berm	28-May	2	Y	34.63376	-76.51278	Lost to raccoons 6/10
33	23.5	Flats in closure	1-Jun	3	N	34.83364	-76.33943	Lost 6/14
34	37.2	Base of dune	3-Jun	2	N	34.67529	-76.48484	Lost to raccoon predation 7/1

#	MILE	LOCATION	FOUND	EGGS	POSTED	Latitude	Longitude	COMMENTS
35	25.4	Base of dune	3-Jun	2	N	34.81211	-76.36058	Lost 6/10
36	28.8	Beach berm	3-Jun	3	Y	34.77588	-76.39696	Lost to raccoon predation 6/5
37	25.6	Beach berm	5-Jun	3	Y	34.80942	-76.36315	Washed away 6/10
38	39.6	Beach berm	10-Jun	1	N	34.64479	-76.50642	Lost to raccoon predation 6/12
39	32.9	Beach berm	12-Jun	2	Y	34.72619	-76.44160	Lost to raccoon predation 6/17
40	26.9	In dunes	17-Jun	2	N	34.79540	-76.37836	Lost to predation 6/24
41	28.6	Beach berm	19-Jun	2	Y	34.77670	-76.39637	Lost to raccoon predation 6/24
42	47.0	Nest not found		?	N			1 chick found 6/26, 1 chick fledged
43	25.7	Flats	1-Jul	2	N	34.80811	-76.36505	1 egg hatched 7/17, chick lost
44	28.3	Beach berm	5-Jul	1	N	34.77976	-76.39351	Abandoned 7/8, human disturbance

44 nests, 5 hatched, 1 chick fledged

APPENDIX 2

BAND COMBINATIONS USED ON AMERICAN OYSTERCATCHERS IN 2002

USFWS Band	Left leg (UL;LL/LL)	Right Leg (UR;LR/LR)	Date	Location	Nest #	Age
805-60068	Y;GF/usfws	Y;O/R	3/28/2002	NCB Mile13.8		Adult
805-60074	W;GF/usfws	W;R/R	5/17/2002	NCB Mile 0		Adult
805-60079	W;G/usfws	-;Y/B	5/25/2002	NCB Mile 9.55	4	Chick
805-60080	O;GF/usfws	O;W/W	5/27/2002	SCB Mile 38		Adult
805-60081	-;GF/usfws	-;Y/W	5/28/2002	SCB The Spit		Chick
805-60082	O;GF/usfws	O;O/O	5/28/2002	SCB The Spit		Adult
805-60083	O;GF/usfws	O;B/B	5/31/2002	NCB Mile 6.15		Adult
805-60084	B;GF/usfws	W;B/W	6/1/2002	NCB Mile 8.4		Adult
805-60085	-;GF/usfws	W;R/W	6/1/2002	NCB Mile 5.9	7	Chick
805-60093	R;GF/usfws	-;-/G	6/16/2002	NCB Mile 9.55	4	Chick
805-60100	R;-/usfws	B;-/-	6/29/2002	NCB Mile 9.55	4	Chick
975-85201	-;GF/usfws	-;G/Y	7/1/2002	NCB Mile 2.3	38	Chick
975-85202	R;GF/usfws	-;G/Y	7/1/2002	NCB Mile 2.3	38	Chick
GF= green flag, G= green, Y= yellow, O= orange, R= red, B= blue, W= white, Usfws= numbered steel Fish and Wildlife Service band						