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MIST NETTING COUNTS ON ELLIOTT KEY, FLORIDA

APR 1 1974

Introduction

The ~~mist net~~ counts that were made on Elliott Key was the first one done on this island. Primarily, the counts were to be conducted in the area where the road was bulldozed in 1968.

This area has primary growth of plants ranging from herbaceous to hardwood trees. The vegetation was extremely dense in this re-growth area.

The main object was to catch and identify the types of birds that are using this area of primary growth.

The help of the National Park Service enabled us to work and make a primary count of this area. This count was done for the Park Service.

Methods

The birds were taken by mist nets just off the road which ran down the middle of the island. There were three nets used, their sizes were eight feet in height and forty feet in length.

The day before the nets were put in place, lanes were cut. These lanes were at a right angle from the road into the re-growth area. The lanes were three feet wide and forty feet long. One lane was Northeast, a second one was Southwest and a third one was Southeast (Tables I, II and III), of the road dividing the island.

The second day, poles were cut approximately ten feet high. The nets were placed on the poles and put in the lanes. One person was always at a net to assure that the loss of bird life would be minimal. The heat was the main factor of concern in bird loss. If a bird is left in the sun and heat more than a half hour, it will die.

The nets were not kept up except during the hottest part of the day which is between 12:00 A.M. and 3:00 P.M. During this time, little or no bird movement took place. The morning and late afternoon are the time of greatest bird activity.

The first day banding of birds was done; on the second and third days, no banding was done. There was a three-day catch period to find and identify the types of birds that use this primary growth area.

Results and Discussion

After three days of netting, seventy-nine birds were caught. In these three days, only one bird that was banded was re-caught. Over this three-day period, it seemed that with each successive day, the numbers of bird caught declined. Table IV in the column adjusted for time shows the decrease. This occurred because the first and third day were half-days while second day was a full day. If the time is adjusted as in Table IV, a decrease of numbers is still evident. There are many possibilities for the decline. One possibility is that the same birds forage in this area daily and were disturbed. A second possibility is after being caught, the bird sends out a warning to others about the area of danger.

Two of the mist nets were the most productive in catching birds (Net I and Net III). These two nets on Tables VI and VII show the vegetation and the types of nets that were used. These tables will point out reasons for the high bird capture in these two nets alone.

At Net I (Location was Northwest), the color and vegetation could be compared to Net III (location was Southeast). Both nets are East but the real comparison is the vegetation and color of the nets. At both nets, vegetation that attracted the smaller birds were *Lysoloma* (*Lysiloma fahamensis*) and Poison Wood (*Melopium torifera*). Where there is *Lysoloma*, was the greatest amount of bird activity. The nets having the same color and texture can also be considered as a factor in numbers of birds netted.

At Net II, the vegetation is totally different. This area was missing the *Lysoloma* which attracts the smaller birds. In this area, the net that was used was gray rather than black and had the same texture. Several large holes

indicated large birds forage in this area.

The location of all the three nets is important factor. Net I and Net III didn't have the sun and extreme heat on them all day, but Net II did have the sun from morning to dusk.

The majority of birds caught were in the Warbler family, which are often one of the first steps in successional bird life outside of a climax forest.

The only time that large birds were captured was when two tiers of netting overhang giving all strength to the net. Generally this was at the bottom of the net.

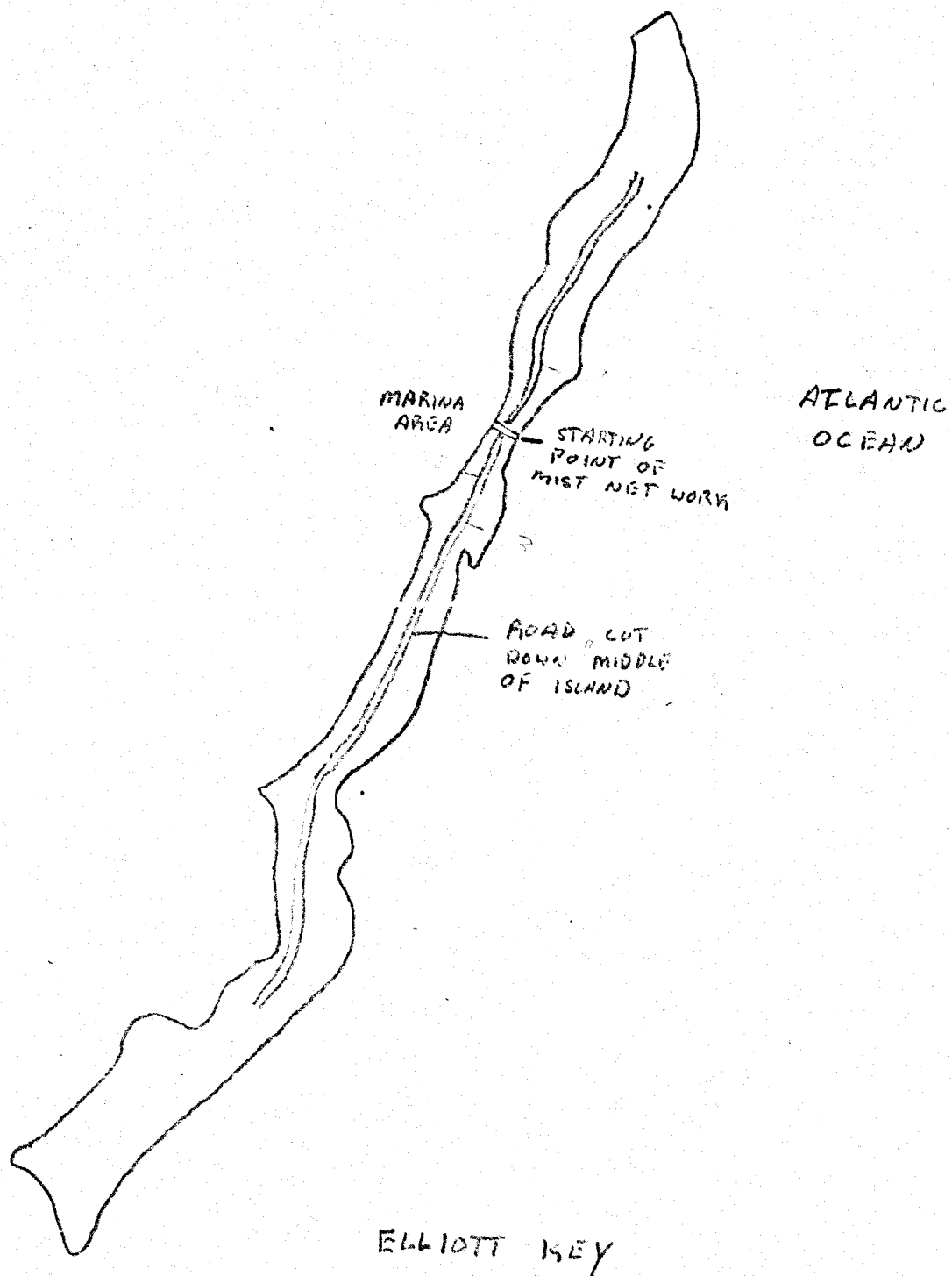
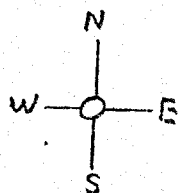
Out of seventy-nine birds, only one bird was killed; this was a larger bird which became extremely tangled and strangled to death. The anticipated loss of life was high due to several factors; the extreme heat, how tangled the bird was and numbers in the net at one time. The nets had to be attended at all times; with all these factors, only four birds had to be cut out. It was a choice of saving the net or the life of the bird. It was not unusual to have six birds in a net at one time.

Summary

Overall, this study was very interesting and well worth the three days of hard work. It does give an idea of what types of birds live in this successional area.

The study gave many possible reasons for the different counts on the nets and the different variety of birds. A follow-up study or studies dealing with the birds should be made. More time to study and collect number of birds to substantiate several theories for low numbers, such as coloration of nets and vegetation would be helpful. A proposal to the National Park Service that that fact should be made.

BISCAYNE NATIONAL MONUMENT



I

MIST NET COUNTS

NET I - NORTHEAST	3/27/73	3/28/73	3/29/73	Σ	$\bar{X}/\text{DAY}$
Cardinal Richmondia Cardinalis	0	2	3	5	1.6
Cat Bird Dumetella Carolinensis	0	1	0	1	.33
Mockingbird Mimus Polyglottos	0	0	0	0	0.0
<u>Warblers</u>					
Ovenbird Seiurus Aurocapillus	0	1	0	1	.33
Palm Warbler Dendroica Palmarum	0	1	0	1	.33
Parula Warbler Parula Americana	5	3	1	9	3
~~Palm~~ Warbler Dendroica Discolor	8	4	2	14	4.6
Yellow Throat Geothlypis Trichas	1	0	0	1	.33
White-Eyed Vireo Vireo Griseus	1	2	1	4	1.3
Sighting at Net Humming Birds					
Light Blue Body, White Belly	1	0	0	1	.33
Black Head and Body, Yellow Band Around Throat	1	0	0	1	.33
Light Gray Body	0	1	0	1	.33
Σ	17	15	7		

II

SOUTHWEST

NET II - SOUTHWEST	3/27/73	3/28/73	3/29/73	E	$\bar{X}/DAY$
Cardinal Richmondona Cardinals	1	0	0	1	.33
Cat Bird Dumetella Carolinensis	1*	0	0	1	.33
Mockingbird Mimus Polyglottos	0	0	0	0	0.0
<u>Warblers</u>					
Oven Bird Seiurus Aurocapillus	0	0	0	0	0.0
Palm Warbler Dendroica Palmarum	0	1	0	1	.33
Parula Warbler Parula Americana	0	0	0	0	0.0
Prairie Warbler Dendroica Discolor	0	1	0	1	.33
Yellow Throat Geothlypis Trichas	0	0	0	0	0.0
White-Eyed Vireo Vireo Griseus	0	0	0	0	0.0
E	2	2	0		

* Died in Net

III
MIST NET COUNTS

NET III - SOUTHEAST	3/27/73	3/28/73	3/29/73	Σ	$\bar{X}$ / DAY
Cardinal Richmondia Cardinalis	0	1	1	11	.33
Cat Bird Dumetella Carolinensis	0	0	0	0	0.0
Mockingbird Mimus Polyglottos	0	1	0	1	.33
<u>Warblers</u>					
Oven Bird Seiurus Aurocapillus	0	0	1	1	.33
Palm Warbler Dendroica Palmarum	4	5	2	11	3.3
Parula Warbler Parula Americana	2	2	1	5	2
Prairie Warbler Dendroica Discolor	2	6	2	10	3
Yellow Throat Geothlypis Trichas	0	0	0	0	0.0
White-Eyed Vireo Vireo Griseus	1	2*	3	6	2
Σ	9	17	10		

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* Banded 71502

IV

NETS	1	2	3	Adj. For Time Half Day	
# Capture					
Day 1	17	2	9	28	28
Day 2	15	2	17	34	17
Day 3	7	0	10	17	17
TOTAL # CAPTURE	39	4	36	79	

V

SPECIES CAPTURE DESCENDING ORDER OF ABUNDANCE

NET I	#	NET II	#	NET III	#
Prairie Warbler	14	Cardinal	1	Palm Warbler	11
Parula Warbler	2	Cat Bird	1	Prairie Warbler	10
Cardinal	5	Palm Warbler	1	White-Eye Viro	6
White-Eye Viro	4	Prairie Warbler	1	Parula Warbler	5
Hummingbirds*	3			Cardinals	2
Cat Bird	1			Mockingbird	1
Oven Bird	1			Oven Bird	1
Palm Warbler	1				
Yellow Throat	1				

* Sighting At This Net Only