SUMMARY REPORT OF THE 1995 AUTUMN HAWKWATCH AT KIPTOPEKE STATE PARK, VIRGINIA

Conducted by
Kiptopeke Environmental Station Research Education Laboratory
K.E.ST.R.E.L.

Research and Report by
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INTRODUCTION

For more than18 years the Kiptopeke Hawkwatch has been conducted by volunteers. During the fall of 1995 the first full-time hawk count was taken by a single observer. From 15 August to 30 November a total of 79,208 raptors of seventeen species were recorded during 966.5 hours of observation. All season totals were new record high counts. All daily counts were new records as well, with the exception of Northern Goshawk and Merlin. A total of 273 species of birds were recorded on the peninsula during the count period. Counts were conducted on a daily basis, except when precipitation or unfavorable winds were prevalent. In future years count methodology will remain consistent to ensure the comparability of the data. Funding for this project was provided by a grant attained through Virginia Coastal Management Resources Program (804-678-0477). This report is the final document in the 1995 contract between Brian L. Sullivan and Kiptopeke Environmental Station Research Education Laboratory (K.E.ST.R.E.L.).

PURPOSE

The purpose of the hawkwatch is to gather long-term data regarding the fall migration of raptors down the Atlantic Flyway of Virginia's Eastern Shore. By establishing a long-term census project, populations and migratory trends can be assessed and monitored. The secondary purpose is to provide public education concerning raptors, their migration, and usage of vital habitat found along the Eastern Shore.

METHODOLOGY

Consistent count methodology is important to ensure the legitimacy of the project. To avoid observer bias, K.E.ST.R.E.L. requires one individual counter to conduct the hawkwatch throughout the entire count period. Relief days were covered by skilled observers familiar with the site and its migration. All census and weather data were recorded hourly on forms provided by the Hawk Migration Association of North America (HMANA). All raptors were tallied individually on hand-held clickers. The hawkwatch platform was utilized on all weather conditions, and proved to be the best place to view the majority of migrants. Counting was attempted for a few hours at two other locations, the GATR Tract, and The Eastern Shore of Virginia National Wildlife Refuge, when, during strong northwest winds, migrants were thought to be moving down the eastern side of the peninsula. However, both sites proved to be inferior to Kiptopeke during these flight conditions. The observer used Zeiss 7x42 binoculars and a Kowa 30x spotting scope. All eagles, Rough-legged Hawks, and Northern Goshawks were aged when possible.

STUDY AREA

Kiptopeke State Park is located roughly 3 miles north of the southern tip of the Delmarva Peninsula along the Chesapeake Bay. Migrating raptors moving south become concentrated by the Atlantic Ocean to the east, and the Chesapeake Bay to the west. Because of the geography of the peninsula, raptors migrating directly south towards Cape Henry, Virginia, become condensed along the bayshore eventually passing over Kiptopeke.

WEATHER AND FLIGHT LINES

A wide variety of weather conditions can be conducive to large movements of raptors at Kiptopeke. The observer found that during favorable winds, i.e. northeast and east, the main line of flight occurred directly over the hawk platform at Kiptopeke, with smaller numbers of migrants moving south over the Chesapeake Bay and down Route 13. The height of migration varied greatly with wind speed. During strong winds, raptors moved low, often at tree-top level, but during moderate winds raptors migrated on all levels; high, medium, and low. On light winds migrants were frequently counted at the limit of binocular range. On calm winds few migrants were observed. Other wind directions proved to be conducive to bringing large numbers of migrants over Kiptopeke as well. North, northwest, and southeast, in order of decreasing productivity, all proved to be excellent. During north and northwest winds large numbers of migrants were present, but were usually observed moving south over Route 13 and extremely high. Southeast winds brought smaller numbers of migrants directly over Kiptopeke and typically at moderate to low heights. South winds were found to be good for small movements of accipiters, and excellent for numbers of Peregrine Falcons. Southwest and west winds were productive only during the peak of the season. On all combinations of westerly winds migrants were detected moving far to the east and away from the observers at Kiptopeke. Heavy precipitation stopped migration, but during the peak of the season, accipiters, falcons, and harriers all migrated during light rainfall. Low, heavy clouds were typically unproductive, cutting off thermal production for soaring migrants.

MONTHLY SUMMARIES

AUGUST

Due to the considerable amount of northeast wind experienced throughout August, the month was productive. The first raptor of the season, an American Kestrel, was recorded at 7:14 AM on 8/15/95. A total of 22 raptors were recorded the first day including the season's first Bald Eagle, a first-year adult. Evacuation from Hurricane Felix left the 16th, 17th, and 18th uncovered. The peak flight in August occurred on 8/29 with 135 raptors counted including 67 American Kestrels and 42 Ospreys. As expected, American Kestrels, Ospreys, and Northern Harriers were the most abundant species recorded during August. Also of note were 3 Bald Eagles recorded on 8/20 and 20 Northern Harriers on 8/23. August brought us a total of 655 raptors during 123 hours of observation.

SEPTEMBER

September began slowly with a week of west and southwest winds. The first east wind on 9/8 brought 385 raptors, including 298 American Kestrels and 57 Ospreys. The second day of northeast winds on the 9th produced 940 raptors including 741 American Kestrels, 120 Ospreys, and 30 Northern Harriers. The first four-digit flight of the year occurred on 9/10 when 1321 raptors were counted, including 1059 American Kestrels. Also recorded on the 10th were 119 Ospreys and 5 Bald Eagles. A total of 920 raptors were counted on the 11th punctuated by 8 Bald Eagles and 26 Merlins. Although 9/12 was slow overall, it brought us the first Swainson's Hawk of the season, a juvenile dark-morph. Topping off

the first two weeks of September were 2651 raptors recorded during a strong northeast wind on 9/15. American Kestrels set a new single day record, 2136, only to be broken later the same month. Also counted on 9/15 were 80 Merlins, 42 Northern Harriers, and the season's first push of Sharp-shinned Hawks, 274.

The last half of September was nothing short of spectacular. On 9/18 an extraordinary 3078 raptors were recorded including 1358 American Kestrels, 975 Sharp-shinned Hawks, 346 Ospreys, a record at the time, and 6 Bald Eagles. On 9/19 a virtual repeat of the previous day occurred when 3046 raptors were counted. Another 1326 American Kestrels were seen as well as 136 Merlins, 1166 Sharp-shinned Hawks, 206 Ospreys, and a juvenile light-morph Swainson's Hawk. The 20th was somewhat slower, yet produced another Swainson's Hawk, a heavily marked juvenile light-morph. Excellent flights continued until 9/27 when a four-day streak of favorable winds produced the largest numbers of raptors ever recorded at Kiptopeke. On 9/27 a remarkable 4546 raptors were counted including 2271 Sharp-shinned Hawks, 1539 American Kestrels, 234 Ospreys, and a record 16 Bald Eagles. The 28th continued our good fortune when a total of 3751 raptors were tallied for the day. On September 29th, a strong northeast wind brought us the most spectacular flight in the history of the hawkwatch. An astounding 8757 raptors were counted including a string of new daily records: 3842 Sharp-shinned Hawks, 2427 American Kestrels, 513 Ospreys, 340 Cooper's Hawks, and 119 Northern Harriers. Also of note were 1316 Broad-winged Hawks, a new single-day record at the time. The volume of migrating raptors that day can not be understated. Hawks were migrating in numbers through every part of the sky. Many observers were on hand to help find flight lines. Their help was needed and greatly appreciated. I have never seen such numbers migrating on such a broad front. The flight was massive, continuing as far as one could see over the bay, as well as to the east over Route 13. Overhead, migrants were thick at all levels, low, medium, and at the limit of binocular vision. It is impossible to capture the magnitude of that day. It was truly remarkable. The 30th continued the streak with 5544 raptors, the second biggest flight ever recorded at Kiptopeke, but paled in comparison to the previous day. Excellent numbers of all species were recorded, with a highlight of 2454 Broad-winged Hawks, a new record. An incredible 42,979 raptors were counted during 295.5 hours of observation. Also noteworthy were the fourteen days of northeast or east winds experienced during September.

OCTOBER

October continued the streak with three 2000+ days in a row. On 10/1, 2161 raptors were punctuated by 81 Peregrine Falcons, 11 Bald Eagles, and 287 Ospreys. October 2nd produced 2463 raptors while the third produced 2680 raptors including a record 102 Peregrine Falcons. Oddly, the flight on 10/3 occurred in less than three hours between 12 PM and 3 PM on southerly winds. Flights were poor for the next 3 days due to southerly winds and varying amounts of precipitation. A cold front on the night of October 7th brought five 1000+ days in a row, with excellent counts for most species. Of note were 13 Bald Eagles on 10/8, the season's first Northern Goshawk on 10/10, three days of 200+ Cooper's Hawks from 10/10 to 10/12, and the first two Golden Eagles of the year on 10/11.

Poor numbers were recorded on the 14th and 15th, however, each day brought a different Swainson's Hawk. A juvenile dark-morph on the 14th, and a juvenile light-morph on the 15th. Mediocre flights continued for the next week with a scarcity of northeast winds. The next gust of northeast wind on 10/25 brought with it 1660 raptors including a record 684 Turkey Vultures. Also noteworthy was a late 122 Ospreys and 11 Bald Eagles. The northeast wind continued on 10/26 bringing us another 1587 raptors including a record 182 Black Vultures,569 Turkey Vultures, 175 Red-tailed Hawks, 64 Northern Harriers, 10 Bald Eagles, and 4 Golden Eagles. Poor winds and mediocre flights would close out the month with the exception of 748 raptors counted on 10/30. A total of 27,185 raptors were counted during 340.25 hours of observation.

NOVEMBER

Although the first two weeks of November suffered from the lack of northeast winds, good numbers of migrants appeared with the passage of cold fronts and northwesterly winds. On 11/4 a respectable 383 raptors were recorded including 11 Bald Eagles and 2 Golden Eagles. A few hours of northeast wind on 11/5 brought us 109 Red-tailed Hawks, 7 Bald Eagles, and 4 Golden Eagles. On the 8th, 848 raptors were tallied including 11 Bald Eagles and 319 Turkey Vultures. The northwest wind continued on 11/9 and produced a record 5 Golden Eagles and 12 Bald Eagles. Also recorded on 11/9 was perhaps the rarest bird of the year, an adult dark-morph Harlan's Red-tailed Hawk. On 11/12 a northwest wind produced 670 raptors including 487 Turkey Vultures, 9 Bald Eagles, and 5 Golden Eagles. On the night of 11/12 an incredible 124 Saw-whet Owls were banded by David Whalen from William & Mary's Owl Research Project, a new record for the east coast.

Above average flights continued through 11/20 with a total of 7 Golden Eagles, and records for both Red-tailed and Red-shouldered hawks on 11/17, totalling 176 and 31 respectively. On 11/21 the first, and last, Rough-legged Hawk of the season was recorded, a juvenile light-morph. On 11/22 the sixth Swainson's Hawk of the year was counted, also a juvenile light-morph. The final week of the hawkwatch was quiet, with small numbers of migrants trickling through. A total of 8389 raptors were recorded during 207.75 hours of observation in November. The last raptor of the season, an adult male Northern Harrier was recorded on 11/28, surely not the last hawk to drift south over Kiptopeke this year. 1995 was an extraordinary year at Kiptopeke, however, further research is essential in making useful comparisons within the long-term data set.

SPECIES ACCOUNTS

Black Vulture *(Coragyps atratus)*

1995 was perhaps the first time an accurate attempt to count Black Vultures was made at Kiptopeke. Small numbers of Black Vultures were present on the peninsula during August when the hawkwatch began. Suspected migrants were seen on favorable winds throughout August and early September, however, few were counted until late September. Numbers of Black Vultures increased until the peak flight of 182 on 10/26. Black

Vultures along with Turkey Vultures present a special problem for counters at Kiptopeke because of their reluctance to cross the bay. Often in late afternoon, after a days migration, large numbers of vultures would move north past Kiptopeke, with single kettles often eclipsing the total count for the day. When this occurred the daily total would consist only of birds moving south throughout the day. One explanation for this occurrence is that vultures migrate on a broad front, down the entire peninsula, congregate at the tip, and then move north up the bayshore eventually circumventing the bay. Typically, after a good vulture flight, very few would be seen the next day, possibly indicating that they moved out of the area. This phenomenon occurred for Red-tailed Hawks and to a lesser extent in other buteos. Also of note was the fact that on some wind conditions vultures and buteos were seen crossing the bay. They were found to cross most often on northeast and southeast winds, possibly suggesting a fear of being blown over the ocean by westerly winds. I feel that the methodology used to count vultures was the most conservative, and is almost certainly an undercount of migrants through the area. The season total of 2172 is evidence of this species northward range expansion. Numbers of Black Vultures counted at Kiptopeke should continue to increase given their current trend.

Turkey Vulture *(Cathartes aura)*
Like the Black Vulture, Turkey Vultures have had a population explosion and range expansion over the past few decades. 1995's season total of 8034 is in keeping with increasing counts along the Great Lakes during spring migration, as well as steadily climbing fall counts at Cape May, New Jersey. The single day record of 684 on 10/25 was impressive with over 500 vultures in the air at one time. Three different individuals were observed in early October with radio telemetry wires on their backs, as well as one with a red patagial marker on the left wing.

Osprey *(Pandion haliaeetus)*
An incredible 5762 Ospreys were counted at Kiptopeke this fall, the largest Osprey flight ever recorded in North America. This species has increased markedly after the banning of DDT in the U.S., and numbers observed at Kiptopeke should continue to increase as more nesting habitat is occupied throughout the Northeast and Canada. Seventeen days of 100+ Ospreys were recorded this season with a peak of 513 on 9/29. Of note was the fact that the majority of Ospreys aged during November were juveniles. Ospreys seemed to migrate in good numbers during most weather and wind conditions, and were often seen crossing the bay well before reaching Kiptopeke. Lines of Ospreys would form far out over the bay and often extremely high. Ospreys and Bald Eagles were found to use similar flight lines on most weather conditions. Ospreys were also found to be good indicator birds during high flights throughout September and early October. When scanning a blue sky for migrants, an Osprey would typically indicate a line of incoming birds ranging from a few dozen to hundreds.

Bald Eagle *(Haliaeetus leucocephalus)*

This year's spectacular flight of Bald Eagles is a promising sign of their rebound after the banning of DDT. With large wintering areas on the Chesapeake Bay area and its surrounding rivers, i.e. the James River, the Delmarva Flyway is perhaps the largest migratory route for Bald Eagles in the eastern U.S. The season total of 264 is incredible, but seems logical considering the number of Ospreys recorded. With a few resident pairs of Bald Eagles in the vicinity of Kiptopeke, much care was taken to ensure that the counted eagles were actually migrants. The local eagles behavior was typically a clear giveaway, differing markedly from that of the migrants. Two local adults were often seen harassing migrants in their territory, but were rarely observed using the high flight line often taken by migrant eagles. An interesting observation from the chart below is the small window of migration utilized by 2, 3, and 4-year old eagles, compared to the extended migration period used by juveniles and to a lesser extent, adults. The peak flight of 16 on 9/27 was a new record for Kiptopeke. Also of note were 20 days of 5+, and 9 days of 10+. Bald Eagles, Ospreys, and Peregrine Falcons were observed taking a nearly east to west flight line high over Kiptopeke on several occasions. Both Bald and Golden eagles were observed migrating in twos and threes on good flights, and were often seen interacting together. A juvenile Bald Eagle with almost completely white flight feathers was observed at Cape May on 10/8 and at Kiptopeke on 10/9. This individual was distinctive giving the appearance of having only dark wing-tips and completely white secondaries.

	8/16-8/31	9/1-9/15	9/16-9/30	10/1-10/15	10/16-10/31	11/1-11/15	11/16-11/30	TOTALS
JUVENILE	5	5	21	29	16	19	7	102
BASIC I		2	8	3	8	8	2	31
BASIC II				2	6	6	1	15
BASIC III (TRANS)		2	10	3	5	4		24
1ST ADULT	2	3	4	5	3	1		18
ADULT	1	9	20	12	11	18		71
UNKNOWN AGE		1			1	1		3
TOTALS	8	22	63	54	50	57	10	264

Northern Harrier *(Circus cyaneus)*

1995's season total of 1697 was a record, but seems low considering the total number of migrants counted. The peak flight of 119 occurred on 9/29 and was also a record. A few things may be responsible for the lower number of harriers counted. They are much less reluctant to cross large bodies of water than other migrants, and perhaps cross the bay well before reaching Kiptopeke. Also large numbers of harriers move south down the barrier islands far to the east of Kiptopeke. Much larger counts occurred on northeast winds suggesting that wind-blown birds end up along the bayshore. Very few adult female harriers were observed at Kiptopeke until late October and November, however, numbers of adult males were seen as early as August.

Sharp-shinned Hawk *(Accipiter striatus)*
The total of 26,355 is remarkable considering the apparent crash of Sharp-shinned Hawk populations in the northeast. Although numbers suffered in October from the lack of northeast winds, Kiptopeke's count was nearly equal to that of Cape May during fall 1995. The peak flight was 3842 on 9/29. The recent increase over the past few years in the northeast is heartening, and bodes well for future years. Perhaps we will once again see numbers of Sharp-shinned Hawks approaching those counted in the early 80's at Cape May.

Cooper's Hawk *(Accipiter cooperii)*
1995 was a spectacular year for Cooper's Hawks throughout the northeast. The season total of 3625 was punctuated by a peak flight of 340 on 9/29. Five days of over 200 Cooper's Hawks were recorded as well as six days of 100+. Record numbers of Cooper's were banded at Kiptopeke this year.

Northern Goshawk *(Accipiter gentilis)*
Although 14 Northern Goshawks is a record for Kiptopeke, one would expect more considering the numbers of accipiters counted. Cape May and Hawk Mountain both experienced above average seasons for the species, possibly suggesting that they stop and winter somewhere between Kiptopeke and Cape May. All Northern Goshawks were juveniles with the exception of one adult on November 4th. A second adult female was reported from the banding project at Wise Point, three miles south of Kiptopeke. The peak flight was 4 on 11/8.

Red-shouldered Hawk *(Buteo lineatus)*
The lack of northeast winds during the last six weeks of the watch greatly reduced the number of Red-shouldered Hawks observed at Kiptopeke. The season total of 153 is well below what one would expect given the number of raptors counted. Buteos are observed in good numbers only on northeast winds, whereas eagles are often seen in numbers on north and northwest. The seasons peak count was 31 on 11/17. Much larger numbers could be expected given the right conditions during their peak.

Broad-winged Hawk *(Buteo platypterus)*
1995's total of 5211 is excellent for any coastal hawkwatch. Good amounts of northeasterly winds during their peak produced a record flight of 2454 on 9/30. Broad-winged Hawk migration is unpredictable and much larger numbers could possibly show up on the peninsula. Of interest was the flight line utilized by Broad-wingeds on the bigger days. Broad-wingeds were observed coming in off the bay from behind the hawkwatch in huge numbers. They were perhaps attempting to cross the bay further up the peninsula and were seen returning over Kiptopeke. Another scenario is that they were migrating in large numbers down the east side and turned north past Kiptopeke after encountering the bay. Large kettles of 300+ Broad-wingeds were breaking in from the water and moving northeast over Kiptopeke without ever being seen passing on their way south. A casual observer may have thought they were crossing the bay from the west side and migrating north. A good number of Broad-wingeds were not counted on the big days due to our

inexperience with the flight lines. No other species of raptor was observed migrating with Broad-wingeds in this manner. Hopefully next time we will be able to recognize this flight line immediately without missing a significant number. Broad-wingeds did not utilize this flight line on small to medium sized flights. They used a typical north to south line overhead along with most other migrating raptors.

Swainson's Hawk *(Buteo swainsoni)*
The six Swainson's Hawks counted at Kiptopeke nearly doubles the number of records for the state of Virginia. Two juvenile dark-morphs and four juvenile light-morphs were counted on six separate dates. A juvenile light-morph was seen in the vicinity of Kiptopeke on 10/17 but was presumably the same bird recorded on 10/15. Although not previously recorded from Kiptopeke, the species is probably an annual migrant. Swainson's Hawks have an extended migration through the East and should be looked for throughout the entire season.

Red-tailed Hawk *(Buteo jamaicensis)*
Like Red-shouldered Hawks, Red-tailed Hawk numbers suffered from the lack of northeast winds during late October and November. Even with only a few hours of northeast winds, good numbers of Red-tailed Hawks were seen over Kiptopeke. The season total of 2083 was punctuated by a peak flight of 176 on 11/17. An adult dark-morph Harlan's Red-tailed Hawk (*B. j. harlani*) was recorded on 11/9. The Harlan's passed directly over the hawkwatch at Kiptopeke, providing an excellent view. After soaring for about forty seconds, it turned west and flapped, directly into a 25 to 30 mph head-wind, across the bay.

Rough-legged Hawk *(Buteo lagopus)*
This arctic breeding raptor was not expected in numbers this far south, as there are few wintering areas south of Kiptopeke. One individual was recorded on the morning of 11/21, a juvenile light-morph.

Golden Eagle *(Aquila chrysaetos)*
1995 was an excellent year for Golden Eagles at Kiptopeke and throughout most of the Northeast. Record numbers were recorded at Cape May and Hawk Mountain. An oddly plumaged juvenile with a large white primary patch on the right wing, and a nearly all dark left wing, was seen at Cape May on 10/25 and at Kiptopeke on 10/26. The total of 37 is remarkable for any coastal hawkwatch. Kiptopeke is farther downridge than most other coastal sites, however, few wintering Goldens have been found south of the Delmarva peninsula. Goldens are not known to winter in the vicinity of Kiptopeke, with only two records from the Cape Charles Christmas Bird Count in nearly thirty years. Perhaps they angle west after crossing the bay and winter in the mountains of Virginia, Tennessee, and North Carolina. The daily peak was 5 on 11/9 and 11/12, but two days of 4 were also

recorded. Four were seen in the air at one time on three occasions and five together on 11/12, an impressive sight anywhere in the East. Of interest was the fact that eagles, both Bald and Golden, appeared in good numbers on northwest winds but buteos did not. Vultures were also recorded in good numbers on northwest winds and Golden Eagles were observed associating with them on numerous occasions.

JUVENILE	34
BASIC I	2
BASIC II	0
SUB-ADULT	0
ADULT	0
UNKNOWN	1
TOTALS	**37**

American Kestrel *(Falco sparverius)*
The flight of American Kestrels recorded at Kiptopeke this fall is one of the highest counts ever recorded in North America. The season total of 20,682 was punctuated by two huge flights of 2427 and 2136, on 9/29 and 9/15 respectively. Eight days of 1000+ American Kestrels made this season unforgettable. Kestrels took advantage of the strong northeast winds experienced throughout September to move in big numbers early in the season. Good flights continued through the beginning of October, and migrants trickled through into late November. American Kestrels have been on a decline over the past decade throughout the Northeast, and such a high count may be an indicator that they are on the rebound. The past few seasons at Cape May have shown an increase in overall numbers. Although Kiptopeke's count was extraordinary, Cape May did not observe Kestrels in large numbers this year. Although the discrepancy is probably weather related, American Kestrel populations should continue to be closely monitored.

Merlin *(Falco columbarius)*
1995 was a record year for Merlins with 2126 counted. Like Kestrels, Merlin numbers were increased by favorable winds throughout their peak period. Large numbers of all three species of falcons migrate down the barrier islands and could be easily missed at Kiptopeke. Northeast winds help push these migrants off the islands and over the peninsula. Merlins are also frequently seen far out over the bay, and a growing tree line a Kiptopeke could hamper efforts to count them in the future. The peak flight of 201 on 9/25 was only 14 short of breaking the daily record set on September 21, 1992. As observed at Cape May, Merlins at Kiptopeke typically peaked during the last few hours of the day, often migrating in numbers until dark.

Peregrine Falcon *(Falco peregrinus)*
Kiptopeke's season total of 985 is second only to Cape May's record count of 1101 during the fall of 1995. Northeast winds helped send numbers through the roof, but oddly the peak flight of 102 occurred on a southeast wind on 10/3. South and southeast winds were found to be excellent for Peregrines at Kiptopeke. On these conditions Peregrines seemed to hug the treetops and pass directly over the hawk platform. On other winds such as northeast, north, and northwest, large numbers of Peregrines were seen over the center of the peninsula. On this typically high flight line, Peregrines would migrate in twos and threes for hours at a time. These migrants were often hard to see and entire flights could easily be missed in a blue sky. Northeast winds seem essential for bringing record numbers of Peregrines in from the ocean and the barrier islands.

Unidentified
One unidentified accipiter was observed on the morning of 9/25 at 7:04 EST. The bird was seen at close range for 15 seconds soaring in front of the platform and eventually overhead. It was so close that a scope was unnecessary, only about 15 feet high. Out in front the bird was an obviously brown backed accipiter with a sturdy flight style, and shaped much like a male Cooper's Hawk. When seen overhead I noticed that the bird was completely barred below with reddish brown. A distinct eye line was visible, and the prominent yellow eye was striking. I was unsure but called the bird into the hawk banders as a European Sparrowhawk *(Accipiter nissus)*. Unfortunately they were outside the blind and could do nothing but watch it continue south. Having no prior experience with the species I was uncertain of the identification and recorded it as UID. If anyone reading this report has thoughts or comments on the bird, they would be greatly appreciated. I have sketches and field notes taken at the time of the sighting, and will provide them upon request. I have seen many juvenile Sharp-shinned Hawks with prominent barring in the flanks but never across the chest and on the underwing coverts. I thought it may have been a second-year Cooper's Hawk that suspended molt in an odd way during migration. Of interest is a report of a similarly plumaged accipiter seen near Kiptopeke on November 5th.

RARITIES
A juvenile Northern Wheatear was seen on 10/15, a Yellow-headed Blackbird on 9/15, and Western Kingbirds on three dates in late September.

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SUMMARY TOTALS AUTUMN 1995

SPECIES	TOTAL	PEAK FLIGHT & DATE	RANGE OF OCCURANCE
BLACK VULTURE	2172	182-10/26	9/8-11/26
TURKEY VULTURE	8034	684-10/25	8/20-11/27
OSPREY	5762	513-9/29	8/19-11/26
BALD EAGLE	264	16-9/27	8/15-11/24
NORTHERN HARRIER	1697	119-9/29	8/15-11/28
SHARP-SHINNED HAWK	26355	3842-9/29	8/23-11/28
COOPER'S HAWK	3625	340-9/29	8/20-11/27
NORTHERN GOSHAWK	14	4-11/8	10/10-11/24
RED-SHOULDERED HAWK	153	31-11/17	8/20-11/24
BROAD-WINGED HAWK	5211	2454-9/30	8/15-11/6
SWAINSON'S HAWK	6	1-6 DATES	9/12-11/22
RED-TAILED HAWK	2083	176-11/17	8/15-11/28
ROUGH-LEGGED HAWK	1	1-11/21	11/21
GOLDEN EAGLE	37	5-11/9,11/12	10/11-11/20
AMERICAN KESTREL	20682	2427-9/29	8/15-11/24
MERLIN	2126	201-9/25	8/29-11/18
PEREGRINE FALCON	985	102-10/3	8/19-11/26
UNIDENTIFIED	1	1-9/25	9/25
TOTALS	**79208**	**8757-9/29**	**8/15-11/28**

DAILY TOTALS AUGUST 1995

	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	UID	TOTALS	HOURS	WIND
8/15/95				1	1					2		1			17				22	10	ENE
8/16/95																					NC
8/17/95																					NC
8/18/95																					NC
8/19/95		2			3							1			27		2		35	5	ENE
8/20/95		2	10	3	4		1		1	4		3			14		2		44	11	E
8/21/95															2				2	11	WSW
8/22/95		3	7	2	11		1								40				64	12	NW
8/23/95			25		20	1				1					68				115	11	E
8/24/95															1				1	10	W
8/25/95			11		15					1		1			67				95	9	NE
8/26/95																					NC
8/27/95																					NC
8/28/95			27		8							1			24		1		61	11	NE
8/29/95		3	42	2	9		2			4					67	2	4		135	12	NE
8/30/95			15		2										10				27	11	NW
8/31/95			12		3	2	2			1					34				54	10	SE
TOTALS	0	10	149	8	76	3	6	0	1	13	0	7	0	0	371	2	9	0	655	123	

DAILY TOTALS SEPTEMBER 1995

	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	UID	TOTALS	HOURS	WIND
9/1/95			6												4	1			11	6	W
9/2/95																					NC
9/3/95																					NC
9/4/95																					NC
9/5/95																					NC
9/6/95			3	1											42				46	10	NW
9/7/95			22		3	3	1			1		1			75				106	10	SE
9/8/95	3	6	57	2	10	3	2			1					298	2	1		385	10	E
9/9/95		1	120		30	19	3			5		4			741	14	3		940	13	E
9/10/95	8	6	119	5	40	36	7		1	12		10			1059	16	2		1321	13	N
9/11/95	6	14	49	8	16	44	7			26		5			712	26	7		920	13.5	NE
9/12/95	3	14	26	2	2	42	2			2	1	1			164	2			261	10	SE
9/13/95			1			11	1								20	1			34	10	W
9/14/95			13			28	2								33	6			82	10	W
9/15/95	12	6	46	4	42	274	24			17		5			2136	80	5		2651	13	NE
9/16/95		4	82	4	12	161	10			3					271	101	3		651	11.5	E
9/17/95			33	1	4	19									34	28	8		127	10	WNW
9/18/95	51	27	346	6	44	975	91			79		12			1358	72	17		3078	13.5	NE
9/19/95	7	12	208	3	24	1166	54			88	1	5			1326	136	16		3046	13.5	NE
9/20/95			97	4	4	246	28			75	1				150	26	2		633	13	E/W
9/21/95		1	29		1	116	7			18					149	46	3		370	10	SE
9/22/95			23		1	45	1								26	34	6		136	10	S
9/23/95			50		25	420	40			9		1			309	19	1		874	10	NNE
9/24/95			87	2	51	972	95			65		1			609	124	15		2021	12	NE
9/25/95	5	11	231	2	28	1515	93			66		10			336	201	54	1	2553	12	E
9/26/95			47		2	45									1	36	4		135	10	W
9/27/95	26	22	234	16	39	2271	177		1	81		12			1539	71	57		4546	12.5	NW
9/28/95			172	12	48	1186	235			354		10			1530	156	48		3751	13	ENE
9/29/95	2	4	513	9	119	3842	340			1316		9			2427	143	33		8757	13	ENE
9/30/95	14	6	285	4	91	1649	233		2	2454		11			629	108	58		5544	13	ENE
TOTALS	137	134	2899	85	636	15088	1453	0	4	4672	3	97	0	0	15978	1449	343	1	42979	295.5	

DAILY TOTALS OCTOBER 1995

	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	UID	TOTALS	HOURS	WIND
10/1/95	11	8	287	11	49	941	134		1	214		5			342	77	81		2161	13	VAR
10/2/95		12	174	2	34	1056	135			66		7			916	28	33		2463	13	W
10/3/95	11	33	260	1	15	992	132			18		9			1083	24	102		2680	12.5	SSW
10/4/95			31	1	2	42	9								23	4	2		114	10	SE
10/5/95			40		2	16	4								32	6	47		147	10	S
10/6/95			40		4	52	7								75	5	14		197	9.5	SW
10/7/95		5	24		4	126	11								22	14	21		227	12.5	S
10/8/95	22	48	250	13	41	581	187		1	84		13			487	23	20		1770	12.5	NW
10/9/95	118	144	163	6	26	320	112		3	16		21			143	42	33		1147	12	E
10/10/95	139	143	171	3	23	1124	230	1	3	36		61			191	22	24		2171	11.5	ENE
10/11/95	112	131	167	7	35	848	281		4	13		34		2	139	27	37		1837	11.5	ENE
10/12/95	60	156	150	7	9	1061	220		4	12		39		1	178	20	43		1960	11	E
10/13/95	36	33	66		10	128	42		1	15		11			54	13	23		432	8.5	S
10/14/95			26		14	38	9				1				48	8	14		158	12.25	SE
10/15/95		12	52	3	10	46	18		1		1	9			77	27	7		263	12	NW
10/16/95	7	9	9		4	10	3	1							4	9			56	11	W
10/17/95	59	168	14	6	2	77	15			6		20			4	7	1		379	11	WNW
10/18/95	133	196	80		25	257	60		4	23		23			60	25	6		892	11	W
10/19/95	107	186	46	3	17	145	27		1	3		25			27	19	9		615	11	SE
10/20/95	39	104	24	1	19	175	17			1		4			34	14	13		445	10	SE
10/21/95			11	1	2	6	1							1	3	8	2		35	10	W
10/22/95	38	96	27		7	35	4		1	1		6			8	14	6		243	10	W
10/23/95	117	268	45	2	11	186	27	1	1	1		29			113	39	17		857	10	SE
10/24/95	5	8	53		3	227	13					3			23	35	11		381	11	S
10/25/95	139	684	122	11	62	383	71		12			72			75	18	11		1660	11	N
10/26/95	182	569	68	10	64	405	46		20	3		175		4	31	9	1		1587	11	NE
10/27/95	25	113	33		39	202	24					9			21	35	11		512	11	SE
10/28/95	10	52	43	4	14	60	9			1		6		1	13	42	8		263	10	W
10/29/95	6	18	11	5	18	57	8			1		23			10	6	3		166	10.5	NW
10/30/95	47	380	52	3	6	86	27	1	7	2		70		1	45	16	5		748	11	NNW
10/31/95	62	173	42	4	37	146	24	1	8	2		77			22	18	3		619	9	SW
TOTALS	1485	3749	2581	104	608	9828	1907	5	72	518	2	751	0	10	4303	654	608	0	27185	340.25	

DAILY TOTALS NOVEMBER 1995

	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	UID	TOTALS	HOURS	WIND
11/1/95			5		5	23	2									1			36	4	SE
11/2/95																					NC
11/3/95	4		12	1	21	83	12					7			6	3	2		151	9	W
11/4/95	45	182	7	11	17	35	23	1	1			52		2	6	1			383	9.5	NNW
11/5/95	8	255	13	7	15	58	22	1	7	7		109		4	2	1	2		511	9	NE/NW
11/6/95	16	131	11	2	28	77	14		3	1		70		1	4	3	2		363	8	NW
11/7/95																					NC
11/8/95	119	319	9	11	46	171	39	4				118		1	3	3	5		848	10	NNW
11/9/95	21	306	17	12	16	48	11		2			118		5	4				560	9	NNW
11/10/95	29	383	10		22	156	21		2			86		1		2			712	9.5	VAR
11/11/95		14	8	1	12	45	11		1			4				1	2		99	7	S
11/12/95	14	487	7	9	19	50	5	1				72		5		1			670	11.5	NW
11/13/95	28	191	2	2	15	193	22	1	8			98		1	1		1		563	9	E
11/14/95																					NC
11/15/95	3	14	3	1	15	20	4									3			63	9	W
11/16/95	7	111	3		9	18	4		4			7		2			1		166	8	NW
11/17/95	61	275	5	4	28	149	17		31			176		2		1	1		750	8	NE
11/18/95			4		3	48	7					1				1	4		68	9	SW
11/19/95	45	192	5	3	21	117	10		7			74		2	2		1		479	10	NNE
11/20/95	69	193	2	1	16	31	8		6			48		1					375	9	N/SW
11/21/95		6	1		2	8	2					3	1						23	8.5	NW
11/22/95	3	113	1		11	30	5		1		1	52			1				218	8	NW
11/23/95	19	200			11	24	3					37							294	9	SW
11/24/95	4	250	1	2	11	21	8	1	3			57			1		3		362	6	NNE
11/25/95		101	3		14	10	2					7							137	8.5	NNW
11/26/95	55	406	2		15	13	6					25					1		523	7	NW
11/27/95		14			2	5	1					3							25	6.25	SW
11/28/95					3	3						4							10	6	S
11/29/95																					NC
11/30/95																					NC
TOTALS	550	4143	131	67	377	1436	259	9	76	8	1	1228	1	27	30	21	25	0	8389	207.75	

KIPTOPEKE HAWK WATCH ANNUAL TOTALS

YEAR	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	UID	TOTALS	HOURS
1977	10	118	254	0	152	6354	28	0	6	428	0	27	0	0	1076	42	10	1	8506	
1978	2	31	195	1	17	1605	5	0	0	11	0	6	0	0	131	26	5	13	2048	33.95
1979	0	16	200	3	24	5022	36	0	1	20	0	24	0	1	1239	108	36	64	6794	50.75
1980	2	100	249	9	75	3416	29	0	0	322	0	32	0	0	452	113	30	80	4909	73.8
1981	47	929	304	18	175	5141	238	1	6	810	0	157	0	0	1708	107	58	81	9780	134.75
1982	20	345	588	23	280	7935	143	0	8	585	0	115	0	0	2135	83	38	33	12331	135.75
1983	43	626	523	28	242	15045	142	2	16	120	0	248	0	2	2452	217	49	91	19846	277
1984	82	1081	681	6	510	19823	291	0	10	668	0	227	0	0	4109	584	115	*310*	28497	380
1985	166	867	1051	16	610	12337	286	8	24	829	0	210	*3*	2	4147	386	156	188	21286	397
1986	15	359	1289	33	426	8215	200	2	16	714	0	145	0	2	2961	431	215	81	15104	382
1987	64	909	809	15	323	4343	288	2	5	758	0	149	1	1	2765	403	158	69	11062	403.65
1988	123	847	1191	54	404	5840	274	1	11	775	0	196	0	3	2441	469	143	106	12878	426.2
1989	8	253	864	38	254	4512	262	2	25	173	0	319	0	1	2874	516	218	97	10416	385.75
1990	34	227	1097	23	285	4624	678	0	46	496	0	193	1	2	2779	495	449	183	11612	470.45
1991	30	1389	717	18	259	4674	523	4	5	57	0	222	0	3	2273	285	245	107	10811	540.05
1992	49	819	384	27	251	4672	695	0	21	96	0	252	0	0	2145	423	171	111	10116	574.1
1993	119	1560	905	130	648	6396	813	11	18	289	0	443	0	4	3533	366	201	144	15580	607.42
1994	190	1939	1049	86	572	6210	926	1	28	1789	0	558	0	6	5224	635	293	88	19594	692.4
1995	*2172*	*8034*	*5762*	*264*	*1697*	*26355*	*3625*	*14*	*153*	*5211*	*6*	*2083*	1	*37*	*20682*	*2126*	*985*	1	*79208*	*966.5*
TOTALS	3176	20449	18112	792	7204	152519	9482	48	399	14151	6	5606	6	64	65126	7815	3575	1848	310378	6931.52

DAILY NUMBER OF VISITORS 1995

8/15/95	1		**9/1/95**	0		**10/1/95**	56		**11/1/95**	1
8/16/95	0		**9/2/95**	0		**10/2/95**	78		**11/2/95**	0
8/17/95	0		**9/3/95**	0		**10/3/95**	44		**11/3/95**	3
8/18/95	0		**9/4/95**	0		**10/4/95**	27		**11/4/95**	16
8/19/95	2		**9/5/95**	0		**10/5/95**	45		**11/5/95**	22
8/20/95	7		**9/6/95**	11		**10/6/95**	52		**11/6/95**	3
8/21/95	2		**9/7/95**	26		**10/7/95**	198		**11/7/95**	0
8/22/95	1		**9/8/95**	8		**10/8/95**	*244*		**11/8/95**	4
8/23/95	1		**9/9/95**	22		**10/9/95**	88		**11/9/95**	5
8/24/95	*11*		**9/10/95**	27		**10/10/95**	111		**11/10/95**	5
8/25/95	3		**9/11/95**	13		**10/11/95**	72		**11/11/95**	12
8/26/95	0		**9/12/95**	8		**10/12/95**	24		**11/12/95**	10
8/27/95	0		**9/13/95**	6		**10/13/95**	28		**11/13/95**	0
8/28/95	2		**9/14/95**	17		**10/14/95**	31		**11/14/95**	0
8/29/95	6		**9/15/95**	10		**10/15/95**	17		**11/15/95**	6
8/30/95	6		**9/16/95**	22		**10/16/95**	12		**11/16/95**	2
8/31/95	2		**9/17/95**	15		**10/17/95**	23		**11/17/95**	1
TOTAL	**44**		**9/18/95**	18		**10/18/95**	15		**11/18/95**	10
			9/19/95	12		**10/19/95**	33		**11/19/95**	17
			9/20/95	8		**10/20/95**	28		**11/20/95**	2
			9/21/95	17		**10/21/95**	18		**11/21/95**	1
			9/22/95	49		**10/22/95**	15		**11/22/95**	5
			9/23/95	26		**10/23/95**	23		**11/23/95**	2
			9/24/95	22		**10/24/95**	22		**11/24/95**	2
			9/25/95	18		**10/25/95**	30		**11/25/95**	0
			9/26/95	28		**10/26/95**	34		**11/26/95**	3
			9/27/95	34		**10/27/95**	13		**11/27/95**	0
			9/28/95	42		**10/28/95**	12		**11/28/95**	1
			9/29/95	59		**10/29/95**	16		**11/29/95**	0
			9/30/95	*67*		**10/30/95**	8		**11/30/95**	0
			TOTAL	**585**		**10/31/95**	7		**TOTAL**	**133**
						TOTAL	**1424**			
TOTAL=	**2186**									