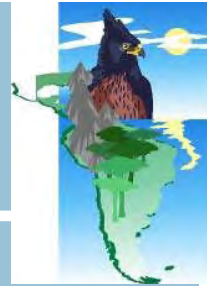


NEOTROPICAL RAPTOR NETWORK (NRN)

Newsletter #7

June 2009



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Studying Hawk-Eagles in Belize

Text and photos by Ryan

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In 2009, the Belize Raptor Research Institute (BRRI) launched the Hawk-Eagle Program in Belize as an effort to better understand all three poorly known hawk-eagle species. This minimum ten year program will focus on locating active nests of all three species of Hawk-Eagle (Ornate, Black, and Black and White), gaining information on nesting biology, home range size, movement patterns, habitat utilization, foraging ecology and understanding intraspecific and interspecific competition through nest monitoring and radio telemetry. To date, BRRI with the help of local peoples and other organizations have located seven active nests throughout Belize; one Black Hawk-Eagle (*Spizaetus tyrannus*); four Ornate Hawk-Eagle (*Spizaetus ornatus*); and two Black and White Hawk-Eagle (*Spizaetus melanoleucus*).

From anecdotal record trends and dwindling habitat the hawk-eagles are considered "species with dangerously low populations" (Clinton-Eitner 1986). All three hawk-eagle species are listed as Least Concern by the IUCN, but the Black and White Hawk-Eagle was listed as Near Threatened from 1988 to 2000 (IUCN 2008). With insufficient



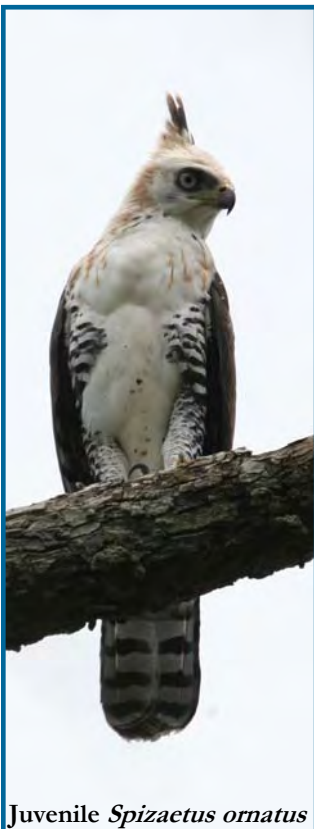
Spizaetus tyrannus in flight

baseline data we can not properly assess present populations and make demographic predictions. The hawk-eagles could be more or less endangered than current estimations, so as we learn more about these species we can better quantify populations.

To date, The Peregrine Fund's Maya Project is one of the largest full scale studies conducted on Neotropical raptors,

which took place in Tikal National Park, Guatemala during the late 1980's and early 1990's. Of the three hawk-eagle species the Ornate Hawk-Eagle has been studied extensively from nest surveys to radio telemetry (Lyon and Kuhnigk 1985, Klein et. al. 1988, Flatten et. al. 1989, J. Madrid et. al. 1991, H. Madrid et. al. 1992). During the Maya Project three Black Hawk-Eagle nests

(Continued on page 10)



Juvenile *Spizaetus ornatus*

Raptor Monitoring in el Valle del Río Sumapaz, Colombia

Text and photos by Diego Soler, MV, MSc, Departamento de Investigación de la Asociación de Veterinarios de Vida Silvestre (VVS) and Asociación Colombiana de Ornitología (ACO), dsolert@gmail.com



Pair of *Falco femoralis*: male (left), female (right)

The Sumapaz River Valley is part of the region of the same name, located in the eastern mountain chain, south of the Cundinamarca in central Colombia. This valley belongs to the biogeographic province of Magdalena, which is inhabited by a high proportion of the raptors found in Colombia (Márquez *et al*, 2005). This distribution of raptors is a result of the interaction of climatic, geomorphologic, and ecological conditions, as well as the evolutionary processes of the region. The type of habitat in this valley is characterized by riparian habitat, bushes and secondary forest, although there are areas that have been altered by humans; additionally, along the entire valley there are thermal currents, which favor the presence of birds of prey.

The knowledge about patterns of distribution, abundance and composition of raptors in the Sumapaz River Valley is limited (Hilty & Brown, 1986; Márquez *et al*, 2005). For this reason, I began monitoring the raptors in the valley zone, specifically in Chinauta (N 4° 16', O 74°30', 990 meters in eleva-

tion), in the Fusagasugá Municipality, Cundinamarca Department.

I used "observation points" to conduct an inventory of raptors at two points: one on the edge of a mountain with a view to the valley and the other in the plains before this edge (with the greatest human intervention). I made the observations over four days in January, 2009 and three days in May of the same year, from 08:00 until 18:00, for an effort of 70 hours.

In January, I sighted a light morph Short-tailed Hawk (*Buteo brachyurus*), a White-tailed Kite (*Elanus leucurus*), a pair of Aplomado Falcons (*Falco femoralis*), a Yellow-headed Caracara (*Milvago chimachima*) and six Black Vultures (*Coragyps atratus*).

In May, I recorded a juvenile, dark-morph Short-tailed Hawk (*Buteo brachyurus*), two Roadside Hawks (*Buteo magnirostris*), a White-tailed Kite (*Elanus leucurus*) and 20 Black Vultures (*Coragyps atratus*), for a total of 35 individuals of six species of diurnal raptors.

The sighting of *B. brachyurus* is consistent with the reported altitudinal distribution (<1800 m.) for

this species (Hilty & Brown, 1986; Márquez *et al*, 2005), but was made in a new location, close to an area where previous sightings had occurred. The identification of this species was difficult due to its similarity to other species (*B. swainsoni*, *B. albicaudatus*, among others) and for its flight in thermal currents alongside groups of vultures (*C. atratus*) (Ferguson & Christie, 2001; Seipke, 2005).

B. magnirostris is a species with ample distribution in Colombia, both in unaltered areas as well as in urban zones, and it is found below 2600 meters of elevation (Hilty & Brown, 1986; Márquez *et al*, 2005).

E. leucurus is distributed up to 2600 meters in elevation along the valleys of the province of Magdalena (Hilty & Brown, 1986; Márquez *et al*, 2005).

F. femoralis is at the limit of its altitudinal distribution in this area (<1000 m.) and it has been reported previously in the biogeographic province of Magdalena (Hilty & Brown, 1986; Márquez *et al*, 2005).

Milvago Chimachima



Two *Coragyps atratus*Dark morph, juvenile *Buteo brachyurus*

M. chimachima is found up to 1800 meters in elevation and, just like the Roadside Hawk, has an ample geographic distribution (Hilty & Brown, 1986; Márquez et al, 2005).

Finally, *C. atratus* has been reported at 2700 meters in elevation and is found throughout Colombia (Hilty & Brown, 1986; Márquez et al, 2005).

These diurnal raptors are present in the study area due to the corresponding lowland tropical habitats close to the base of the mountains, forests mixed with pastures, bush steppes and open areas, as well as the presence of potential prey which includes other bird species, rodents, lizards and insects (Márquez et al, 2005).

These are the preliminary results of this initial monitoring effort, which will contribute to the knowledge of the raptor species in the Sumapaz River Valley, clarifying certain aspects about their patterns of distribution, abundance and composition in these types of habitats, taking into

account that in this small region six species were recorded in two distinct and short periods of time.

Taking these results into account, the Sumapaz River Valley is clearly important to birds of prey, based not only on the above-mentioned landscape and habitat characteristics, but also on the fact that in this valley one can observe species of raptors - some of which have been previously documented in similar habitats, as well as new sightings, such as *B. brachyurus*. This site is an important point from which to conduct surveys for the raptors mentioned here as well as other species of birds of prey in the long term.

I wish to thank the members of the discussion groups "Neotropical Raptor Network" and "Foro Rapaces", especially Sergio Seipke, Agustín Quaglia, Liliana Oliveira, Carlos Funes, Lloyd Kiff and Helen Snyder, for their support in the identification of some species men-

tioned here.

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The American Kestrel: Understanding Aspects of its Behavior in Rural and Urban Environments

Text and Photo by César Lautaro Chávez-Villavicencio

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INTRODUCTION

Falcons, which belong to the family Falconidae, are voracious hunters of birds, small mammals and some insects. They normally capture their prey from great heights and exhibit unique behaviors within this family. Falcons are known for having pointed wings and long tails. The American Kestrel (*Falco sparverius*) is distinguished from other falcons for its small size and its distinct rufous colorization and black markings. The species frequents open fields and can be seen on the coast and in the Andes of Peru (Koepcke 1964). This species holds territories (which it defends quite fiercely) and can be seen frequently in both rural and urban environments. Due to the relative ease of observing a raptor in these environments, we decided to study certain aspects of its behavior both in the coast and in the mountains of Peru.

METHODOLOGY

I began the study in January of 1995 and finished in July of 2003. The territorial and behavioral observations I conducted principally in the urban area of Los Jardines of the San Martín de Porres and Jesús María districts, between 07:00 and 13:00 and between 15:00 and 18:00, from a set observation point at a height of 7.50 m. above the ground, from January until March, 1995. Observations were made four times per week but only two observations per week were made during the months of April and December

of the same year. To define a pair's territory, I used an urbanization planning map designed by the Peruvian Telephone Company. On this map, I marked the exact points where the birds were sighted when the bird was perched, and marked an approximate point when the bird was flying or if access to the site was difficult. I defined the limits of a pair's territory by marking those points at which I registered confrontations with other bird species or with individuals of the same species.

I made additional observations in parks and plazas within the San Martín de Porres and Jesús María districts, the Universidad Nacional Mayor de San Marcos campus, the Unidad Vecinal, the Universidad Nacional de Piura campus, and plazas and parks in the province of Piura y Sullana over several months from January 1996 to July 2003, to gain information about diet, reproduction, territorial defense, care of the chicks and other behaviors. In April and July 1996 and 1997 I also made observations in a rural zone in the province of Canta (Lima), close to the Chillón River in Obrajillo, and in the outskirts of Piura y Sullana between 1998 and 2003.

RESULTS

Delimitation of Territory

The American Kestrel (Fig. 1) is a territorial species. It defends its territory with direct con-

frontations; when another individual of the same species or a different species invades a pair's territory, the male and the female act right away to chase it off. They both stoop the intruder, often making contact with it, while emitting a "kirí kirí kirí" sound. In the urban areas I observed that the pair works together to delimit their territories. Both the male and the female make flights around the area, perching in sites that are considerably high such as television antennas located between 10 and 15 m. above the ground or radio antennas that are 20 m. or higher. One of the individuals being studied was observed perching on a transmission antenna located on La Milla Hill (District of San Martín de Porres), at an approximate height of between 170 and

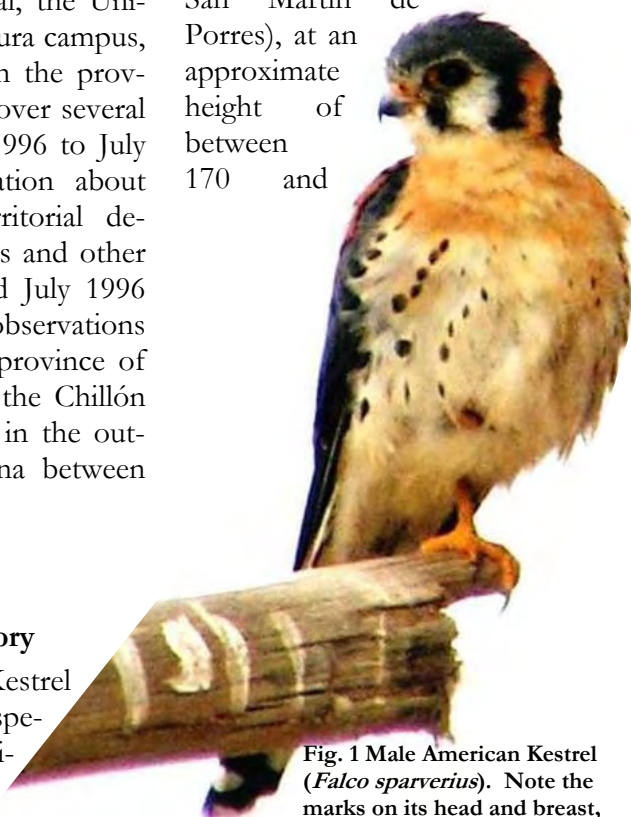


Fig. 1 Male American Kestrel (*Falco sparverius*). Note the marks on its head and breast, characteristic of this species.

200 m., above the North Pan-American Highway.

On many occasions I observed the pair together on the same perch. I also noted that each time the male flew from that perch to another perch, the female took off 5 or 10 seconds after the male. During these flights, they did not emit any type of vocalization, but at each perching point the pair remained vigilant, looking from one side to the other for one or two hours, or even up to 4 hours on some occasions. The flights delimiting the territory took place about one month before copulation.

This area, delimited by the pair, I considered to be their breeding territory, due to the fact that within this territory I observed them copulate, and care for and feed their young. This territory is framed by a larger territory, in which I could observe an individual making demarcation flights but with less frequency than in the reproductive territory. The largest territory of a pair is estimated to be 60 hectares, while the reproductive territory is approximately 25 hectares. (Fig. 2). In rural environments, it appears that the territory of the American Kestrel is much larger than in urban environments, but this still needs to be confirmed. If, in fact, their territory is much smaller in urban environments, anthropogenic factors or a greater abundance of prey may be the cause.

Description of Habitat

Urban Environments

Though varied, habitats within American Kestrel territories include parks with trees up to 5 m. in height, bushes and grass. The trees are used as perches for resting, roosting, or patrolling. During my obser-

vations, the pair perched on the periphery of the tree tops about 3 or 4 meters from each other. I did not observe them doing anything else in these areas. They also used radio towers that were 15 m. high, water tanks at 40 m. high and church steeples. The individuals perch at different heights and from there carry out their observations and vigilance of their territory. These sights are also used for copulation and feeding. The electrical and telephone wires, posts, among other places, are also used as resting or observation points.

Rural Environments

While urban sites are predominantly composed of man-made structures within the green areas, rural environments are composed of much more natural space. There are many trees that reach up to 20 m. in height. There are also many bushes and agricultural fields mainly of corn and cotton, which is where I saw the falcons hunt with the greatest frequency.

Capturing of Prey

In my study, I was able to determine 7 ways in which this species captures and feeds on its prey:

1. Perch – Static Prey – Perch:

The individual locates its prey from high up on a perch. The prey may be found in tree branches or on a telephone cable or other perches. The Kestrel makes a stooping dive after the prey, grabs it with its talons and returns to feed at the same perch from where it started.

2. Perch – Static Prey – Nearby

Perch: This hunt occurs the same

way as described above (1.), but in this case, the falcon does not carry its prey back to the original perch, but to a spot closest to the kill.

3. Perch – Static Prey – Far

Perch: This hunt occurs the same way as described above (1.) but in this case the falcon, after catching its prey, flew farther away to an unknown site.

4. Flight – Static Prey – Nearby

Perch: The individual falcon spots its prey from high up, and after diving, hovers in the air. It then stoops onto the prey and carries it to a nearby perch to feed.

5. Flight – Static Prey – Far

Perch: The same thing happens as in the above example (4.), but this time the individual flies to a far off, undetermined perch.

6. Perch – Prey in Flight – Far

Perch: The falcon spots its prey, which is in flight, from a high perch. It takes off in pursuit. If successful, the kestrel carries its kill to a safe, distant perch to feed.

7. Flight – Prey in Flight –

Perch: In this case, an individual spots its prey from the air and pursues it by stooping. In case it catches its prey, it carries it to a safe place – a perch either close by or far away, to ingest it.

During this study, I observed these small raptors feeding on *Colombina cruziana* and unidentified bat species. I also observed one individual feeding on a cockroach (*Periplaneta americana*) in an

(Continued on page 6)

AMERICAN KESTREL CONTINUED FROM PAGE 5

urban environment, but I did not see the capture.

Reproduction

This is the first year that a pair has been observed nesting at this site. I could find out very little about the reproductive behavior of the American Kestrel. However, I observed that they do not participate in any notable courtship behavior. The male chases the female directly from perch to perch within their territory, until both are on the same perch and they copulate. Copulation is quick – lasting barely 2 seconds. When the male dismounts from the female, they both remain still for a minute or

two, observing their surroundings, before visiting other perches within their territory. I was unable to locate the nest, nor how it was made. The nest was most likely located in the area of Cerro la Milla. Access to this site is restricted because of the cell phone towers. Since I could not locate the nest, I also was not able to determine the number of eggs laid, though Mc Collough (2000) says that the female can lay up to three eggs and be quite promiscuous – having two or three partners. During this study, I observed that the female remained with the male at all times. About 90 days after copulation, I observed an individual fledgling. It was interesting to observe how often the male as well as the female fed the newest addition to the family.

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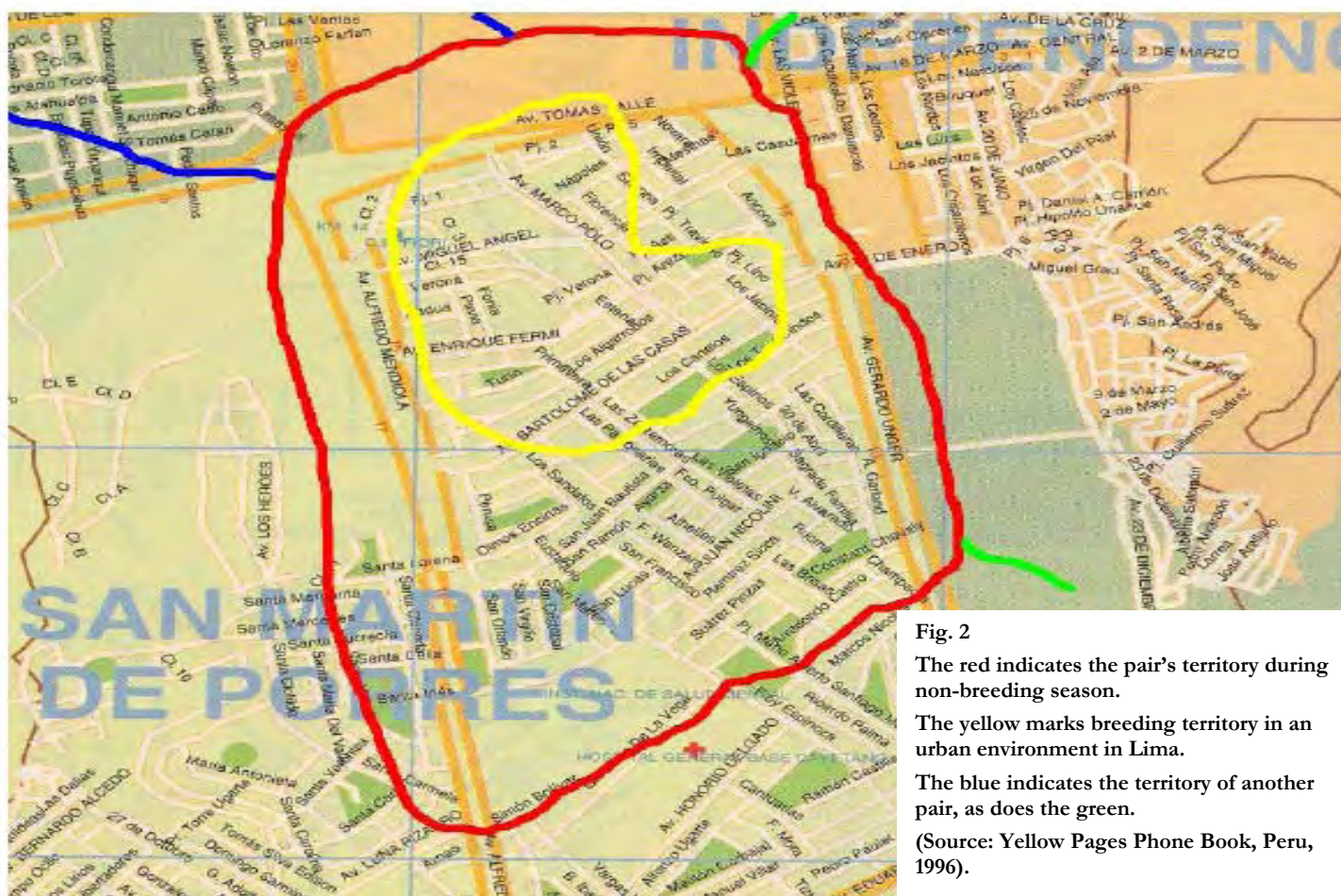


Fig. 2

The red indicates the pair's territory during non-breeding season.

The yellow marks breeding territory in an urban environment in Lima.

The blue indicates the territory of another pair, as does the green.

(Source: Yellow Pages Phone Book, Peru, 1996).

Adventure in the forests of Darien: Who is Nepono? A Children's Perspective

Text and Photos by José de Jesús Vargas González, The Peregrine Fund, E-mail: jvargas.gonz@gmail.com

"Nepono is a four year old Harpy Eagle that hatched in captivity in Panama City. She is curious, calm, observant, and, most importantly, a peaceful bird: this eagle would never cause any harm to people. We should protect and conserve her in this amazing forest." This was the answer Embera technician, Liofano Berrugate, gave to a child's question "who is Nepono?"

And... "What does Nepono eat?" This question came from a little boy. I was amazed by this question, since this particular child had participated in several of the environmental talks we have given in this community. Instead of answering the question, I asked the boy: "What does the Harpy Eagle eat here in Darien?" He responded immediately: "the Harpy Eagle eats 'buchas' (sloths), gototus (Howler Monkeys), bichichi (Geoffroy's Tamarin), and sometimes opogas (iguanas)." After hearing this correct answer, I asked: "Then, why do you ask me what Nepono eats?" And he answered, "I thought that Nepono eats special food, because



© Reinaldo Carpio

she is from the city..."

After a brief explanation about Nepono, and her ecology, Rosa Amalia, an 11 year old girl asked me, "Can we draw Nepono?" That question triggered an improvised environmental education activity with the children of the La Marea community. The children, between 4 and 12 years old, drew their vision of

Harpy Eagles; some drawings looked like other birds of prey, whereas others had very impressive similarity with Harpy Eagles. After they had finished drawing, Liofano and I asked some of the children to explain their art. Rosa Amalia was the first volunteer to explain her drawing (of a juvenile Harpy Eagle perched in a tree in disturbed forest.

HARPY EAGLE EXPERIMENTAL RELEASE



"Nepono"

"Nepono" is a captive-bred female Harpy Eagle hatched in captivity as part of The Peregrine Fund's Captive Breeding and Release Program for this species. She hatched on December 31, 2004 at The Peregrine Fund's Neotropical Raptor Center in Panama City and, at 18 months of age, was released in Soberania National Park, Panama. There, she learned to hunt and successfully adapted to her environment. In 2009, she was transported to the Forest Reserve of Chepigana in Darien Province, and re-released a month later, as part of an experimental project. Our goals for this experiment are: 1) to test whether a captive-bred female would bond with a wild male, preferably one individual that had recently lost its mate, and whose territory is close to the female's release site; 2) to measure survival of a captive-bred eagle released into the wild and study movement and dispersal patterns and behavioral interactions with wild eagles; 3) to develop guidelines for reintroducing endangered tropical raptors into the wild; and 4) to increase knowledge that contributes to the conservation goals of our reintroduction and restoration programs.

I asked her: “Why didn’t you draw a beautiful forest?” She responded: “because I know that the Harpies like areas like this, too. I drew the area around my grandfather’s farm, where I saw Harpy Eagles several times and even possible prey species such as monkeys.” She also exclaimed: “my grandfather doesn’t kill Harpy Eagles, because they protect and control plagues in our cultivations, such as zuzumas (Coatis) and bichichi (Geoffroy’s Tamarin).” Rosa Amalia took the opportunity to give us an educational talk on why we should conserve the Harpy Eagle. In a few minutes this little girl explained in colloquial and simple words some basic concepts of habitat use, diet, and positive mutualism interactions between human and eagles. Rosa’s perception about Harpy Eagles is the result of personal experiences and an exchange of cultural knowledge with her parents. Looking more closely at Rosa Amalia’s drawing, I asked her: “Why does your Harpy Eagle have small legs?” She smiled innocently and said: “Because, with small legs Nepono can hold tight in the branches of the tree.” Right

away, Kelvin a boy of 12 year old exclaimed: “Now, Me...!”

Just as with Rosa Amalia’s drawing, Kelvin’s picture also doesn’t include forest. Kelvin explained that he didn’t have time to draw a pretty forest, as we find around La Marea community. But, he drew a mountain, because “Harpy Eagles like to live there.” He gave details about his drawing and mentioned the fact that he drew two Harpy Eagles because he heard in a community meeting that Nepono, the eagle of Panamá, doesn’t have a mate, and came to La Marea to find one. Kelvin drew a picture of a lonely Harpy Eagle, which comes to Darien to be happy together with other Harpies in the mountain.

I asked: “Kelvin, have you seen wild Harpy Eagles?” He said “no,” but with a strong and secure voice, Kelvin called out: “I don’t see Harpy Eagles in the field, but I know a lot about them, because Kathia, Saskia, Marta, you and your team gave talks and presented videos in our communities, and I learned all about them. I will remember forever these words. Examples like this encourage us to continue working in the field. At this moment, I smiled, and said: “thank you very much Kelvin for your words.”



Jose Vargas talking with the children from La Marea about Harpy Eagles

Then, Liofano whispered “Who is the author of this amazing drawing?” Then, Reinaldo stood up, and said, “It’s mine!” Reinaldo is a 10 year old boy from La Marea. His drawing was elaborate, with very contrasting colors. This boy drew a Harpy Eagle hunting an armadillo. As he talked about his drawing he said: “my mother told us every day “barriga llena, corazón contento” which mean: “full stomach, happy heart”... so then, if Nepono can find good prey in this forest in La Marea, she will be here forever.” Everyone in this activity enjoyed Reinaldo’s short, interesting and innocent description of the life of a Harpy Eagle.

Liofano and I had a lot of fun listening to the children’s stories.. We learned a lot from them and they, in turn, had an unusual afternoon...

they didn't swim in the river, or play soccer, or go out to work with their fathers... this afternoon they spent teaching us about their perception of nature.

We conclude that Nepono is a Harpy Eagle of La Marea... she is happy because she has a lot of prey to hunt, like monkeys and sloths; she is happy in the forest of La Marea because there are other eagles in this ecosystem; Nepono likes to inhabit the mountain, and that sometimes she visits disturbed forests to hunt animals that can be harmful to our crops. But no one said it better than Muzula, a 3 year old, girl when she exclaimed "It is our National Bird, then we need to take care of her."

Note: If you want to follow what is happening with Nepono visit: http://www.peregrinefund.org/notes_category.asp?category=Harpy%20Eagle%20Field%20Studies%20in%20Darien

* * *

WHAT'S NEW IN RAPTOR LITERATURE

Compiled by Lloyd Kiff, The Peregrine Fund, lkiff@peregrinefund.org



Falcon plate by J. Schmitt

1. One book project is the **Field Guide to the Raptors of Mexico and Central America** being written by Bill Clark and illustrated by John Schmitt. This volume will also be published by Princeton University Press. The author is unquestionably the world's leading expert on raptor identification, and he is the author of well regarded raptor field guides for North America and the Palearctic. The artist prepared the plates for the latter guide, as well as several for the National Geographic field guide to North American birds. It is a much anticipated guide for the raptors in a region that is visited frequently by birders from all over the world. It should be of particular use to the many volunteers participating in raptor migration monitoring at the standard sites in Mexico, El Salvador, Costa Rica, and Panama, and others.



White-tailed Hawk plate by J. Schmitt

2. An important volume that may not have come to the attention of some Neotropical raptor researchers is **"Current raptor studies in Mexico,"** edited by Dr. Ricardo Rodríguez-Estrella and published by the Centro de Investigaciones Biológicas del Noroeste, S.C. and CONABIO in 2006. This book contains 15 papers on diurnal raptors and owls, including several particularly valuable reviews of their status and state of knowledge in Mexico. Among these, the comprehensive review by Paula Enríquez, David Johnson, and José Rangel-Salazar on "Taxonomy, distribution, and conservation of owls in the Neotropics: a review" will be of general interest to all Neotropical raptor enthusiasts. Clearly, Mexico has one of the most active raptor research communities among Western Hemisphere countries, and Dr. Rodríguez-Estrella is to be commended for organizing and editing this fine production. Inquiries about its availability can be directed to him at estrella04@cibnor.mx.

3. Sergio Seipke, of the Universidad Nacional de La Plata in Argentina, is working steadily to complete **"Raptors of South America,"** a field guide which will be published by Princeton University Press in their "Princeton Field Guide" series. Hawk Mountain Sanctuary is the Conservation Sponsor of the project, and several private donors are also helping sponsor the preparation of the guide. Sergio will be the sole author, Frederick Pallinger (São Paulo, Brazil) is the artist, and Dario Podesta (Puerto Madryn, Argentina) is the collaborating photographer. Keith Bildstein is overseeing the project and coordinating the fund raising. This will be the first field guide focusing specifically on the raptor species of South America.

(HAWK-EAGLE STUDY IN BELIZE CONTINUED FROM PAGE 1)

were studied, which gained valuable information on nesting, diet and movement patterns, but not enough to make any population estimates (Funes et. al. 1992). Other than the Maya Project only a few nests have been recorded throughout the Black Hawk-Eagle's global range and only one study has been conducted on home range and movement patterns (Smith 1970, Rangel-Salazar and Enriquez-Rocha 1993, Canuto 2008). The Black and White Hawk-Eagle is the least known and basic natural history information is lacking, including identification of juveniles and incubation periods. It has never been studied extensively and only two nests have been described (Strauch 1975, Canuto 2008).

In February of 2009 Rick Malupo and I monitored five hawk-eagle nests in Belize, which included

three Ornate Hawk-Eagles, a possible Black Hawk-Eagle and a Black and White Hawk-Eagle. One of the three Ornate Hawk-Eagle nests in Rio Bravo Conservations and Management Area (RBCMA) was active with the two inactive nests consisting of a fallen nest and an abandoned nest engulfed with a bromeliad and no individuals in the area. The active nest consisted of a begging juvenile still dependent on its parents in an adjacent tree 65 m from the nest tree with both adults present. We also located a begging juvenile (BasicI), approximately 7 km away from any known nest, that was most likely still dependent on its parents. This area will be searched in the future for an active nest. While checking the Black Hawk-Eagle we flushed an adult from a Cohune Palm approximately 200 m from where a nest was observed in 2005. We could not see any sign of a nest, but when checked later that day we observed a pair soaring overhead calling, suggesting that a nest could be in the

area and courting had begun.

One of the two known Black and White Hawk-Eagle nests in Belize located on the Hidden Valley property was checked for activity. On 22 February 2009 the female was observed either brooding or incubating through a spotting scope approximately 2 km away from the nest across a large valley. On 24 February Rick Romero observed a single chick being fed by a parent. An attempt to locate the nest on foot was not successful as bad weather made nest searching difficult. A second attempt to locate the nest on foot on 14 May was successful, but the juvenile was not observed in the nest or around the nest area. However a single adult was observed perched in the nest tree. Either the chick fledged or did not survive to fledging. In the other two hawk-eagle species fledging



Adult *Spizaetus ornatus* at nest with young.

occurs at approximately 2.5 months and the juvenile is dependent on the parents up to a year while staying in close vicinity to the nest, suggesting that this nestling might not have made it to fledging. This is only the fourth nest to be observed of this species throughout its entire range.

All nests will be continuously monitored and next year we plan to start radio tagging both adult and juvenile individuals of all three species to determine home range, dispersal patterns and foraging ecology. We will also continue to search for active nests by talking to local peoples and surveying locations where hawk-eagles have been sighted. For more information visit the Belize Raptor Research Institute website at www.belize-raptor-research.org or if you know of any hawk-eagle nests in the region please email me at harpiabz@yahoo.com.

* * *



Spizaetus melanoleucus nest

A CLOSER LOOK: THE BELIZE RAPTOR RESEARCH INSTITUTE

MISSION— Help protect neotropical raptors in the northern Central America region through the sound science approach, while striving to learn about raptors in the wild through extensive field research, and educating the local and international public about raptor conservation.

GOALS

- Better understand neotropical raptors through sound science, so better management decisions can be made
- Provide education outreach throughout Belize and the region
- Train future conservationists and raptor biologists in field research techniques
- Provide volunteer and internship opportunities for national and international students
- Partner up with local and international conservation groups
- Help protect raptors in the wild through education and research



**Neotropical
Raptor
Network**

Fondo Peregrino - Panamá
www.peregrinefund.org
www.fondoperegrino.org

We are on line!
www.neotropicalraptors.org

The NRN is a membership-based organization. Its goal is to aid the research and conservation of Neotropical raptors by promoting communication and collaboration among biologists, ornithologists, raptor enthusiasts, and other conservationists working in the Neotropics.

To join the NRN please send an email to mcurti@fondoperegrino.org, introducing yourself and stating your interest in Neotropical raptor research and conservation.

CONFERENCES AND MEETINGS

25th INTERNATIONAL ORNITHOLOGICAL CONFERENCE August 22-28, 2010. Campos do Jordao, Sao Paulo, Brazil. For more information visit: <http://www.ib.usp.br/25ioc/>

IX NEOTROPICAL ORNITHOLOGICAL CONFERENCE 2011, Peru. For more information visit: <http://www.neotropicalornithology.org/>



Vultur gryphus Photo by Marta Curti

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