

# CASA

## Casa Avian Support Alliance

## Preliminary Results of Avian Surveys on CASA Reforestation And Habitat Restoration Site

Wendy Dexter and Jeffery Alvarez

*In January of 2006, CASA biologists Wendy Dexter and Jeffery Alvarez began a sequence of observations to obtain data that could be used to document and evaluate the efficacy of the habitat restoration and reforestation taking part on the northern portion of the Casa del Caballo Blanco (CDCB) property (Specifics of that undertaking are provided on page 3).*

*A primary focus of the study is to monitor the habitat restoration relative to changes in the avi-fauna population that utilizes the property for nesting and foraging. The following report is the first in a series that will serve to document these changes through time.*

### Introduction

As part of a self-imposed stewardship directive, Casa del Caballo Blanco maintains 15 acres (study area) north of the CDCB facilities with the intent of allowing the re-growth of natural vegetation. The presumption is that with the increase in natural vegetation and vegetative complexity, resident and migratory birds will find and utilize the site for foraging, roosting, and reproduction. The year in

which the site was originally cleared of forest for agricultural purposes is unknown. With the transfer of ownership to CDCB, the site was allowed to go fallow and return to a natural state. During this initial period, plans were made to set up a long-term avian monitoring program. Dominant vegetation changed from grass and sporadic patches of shrubs to a mosaic of open grass patches and shrub stands during this time. Conditions at the inception of the avian monitoring program (2006) represented a relatively open field with approximately 50% to 60% of the study area covered by various shrubs and small trees (< 2 meters tall).

### Methodology

No baseline information exists for the site. Avian species associated with various habitat types were determined through observations of birds on various habitats adjacent to CDCB and in the surrounding areas. Standardized avian monitoring began in January 2006 and is planned for every January and July for the next 5 to 10 years. Biologists conducted semi-annual surveys on eight

randomly-selected fixed plots. Sampling was performed between 0600 hrs and 1100 hours—when bird activity is typically the greatest. After reaching a plot point, observers stood quietly for one minute before beginning sampling to allow birds to settle and biologists to become ready for observations. Point sampling occurred for five minutes at each plot. Plot size averaged ten-meter radius from the center of the plot. Birds were counted if they were observed or heard within the plot, or if they flew through the plot at any observable height. Species, number of individuals, type of activity, and whether the animal was observed or heard were recorded.

### Results

Only the results from January 2006 and 2007 surveys are being reported at this time because there is not yet any comparable data for the July 2007 survey period. Because neo-tropical migrants are absent in July, data are not comparable with the January survey period.

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### Special Points of Interest:

- Mr. Baldemir Manzanero named In-Country Director of CASA, January 2007.
- First In-Country Board Meeting (General Meeting) to be held at CDCB April 7, 2007.
- First nesting bird observed in habitat restoration area, March 2007.

*Hola, Greetings from Gringo the namesake of Casa del Caballo Blanco, we are working on a CASA web page, in the mean time visit us at*

[www.Casacaballoblanco.com](http://www.Casacaballoblanco.com)



Jodi

Table 1. Species observed and the numbers recorded in January 2006 and 2007 at Casa del Caballo Blanco, San Ignacio, Belize

Common Name <i>Scientific Name</i>	Abundance Season	Habitat	2006	2007
Melodious Blackbird <i>Dives dives</i>	C to VC	open areas, forest edge	6	0
Orchard Oriole <i>Ictarus spurius</i>	C W	open areas, forest edge, 2 <sup>nd</sup> growth scrub, fields	3	0
Black Vulture <i>Coragyps atratus</i>	C	in or over every habitat except unbroken dense forest	2	0
Ruddy Ground-dove <i>Columbina talpacoti</i>	C	open areas, fields, savan- nas	2	0
Boat-billed Flycatcher <i>Megarynchus pitangua</i>	FC to C	forest edge, riparian for- est	1	0
Blue-black Grassquit <i>Volatinia jacarina</i>	C to VC	fields, low 2 <sup>nd</sup> growth	1	0
Golden-fronted Woodpecker <i>Melanerpes aurifrons</i>	FC	forest edge, open areas with trees	1	0
Roadside Hawk <i>Buteo magnirostris</i>	C	woodlands, forest edge	1	0
Groove-billed Ani <i>Crotophaga sulcirostris</i>	C	forest edge, 2 <sup>nd</sup> growth scrub, fields	2	11
Great Kiskadee <i>Pitangus sulphuratus</i>	VC	open areas, forest edge, 2 <sup>nd</sup> growth scrub, fields	1	1
White-collared Seedeater <i>Sporophila torqueola</i>	VC	forest edge, 2 <sup>nd</sup> growth scrub, fields	1	1
Gray Catbird <i>Dumetella carolinensis</i>	C W	forest edge, 2 <sup>nd</sup> growth scrub	1	7
Tropical/Couch's Kingbird <i>Tyrannus melan- cholicus/couchii</i>	C to VC	open areas	0	1
Red-lored Parrot <i>Amazona autumnalis</i>	C	forest habitats, savannas	0	2
White-winged Dove <i>Zenaida asiatica</i>	C	fields, 2 <sup>nd</sup> growth scrub	0	73
Social Flycatcher <i>Myiozetetes similis</i>	VC	open areas, forest edge, 2 <sup>nd</sup> growth scrub	0	3
Brown-crested Flycatcher <i>Myiarchus tyrannulus</i>	C / VU S / W	forest interior and edge	0	3
White-fronted Parrot <i>Amazona albifrons</i>	C	savannas, forest edge, 2 <sup>nd</sup> growth scrub, cultivated fields	0	2
White-eyed Vireo <i>Vireo griseus</i>	FC to C W	forest edge, 2 <sup>nd</sup> growth scrub	0	1
Common Yellowthroat <i>Geothlypis trichas</i>	C W	forest edge, 2 <sup>nd</sup> growth scrub, savannas	0	1
<b>TOTAL</b>			<b>22</b>	<b>106</b>

Twenty individual species were observed over the 2006 and 2007 avian survey periods (Table 1). Eight species were observed that were exclusive to 2006, and another eight were only observed in 2007. Four species occurred in both surveys. A total of 12 species were observed in each survey.

#### Discussion

Although there was little overlap in the species composition for the January 2006 and January 2007 surveys, the typical habitat preferences of most of the species observed included habitat representative of the study site in both 2006 and 2007.

The state of the study site in January of 2006 was generally characterized as open areas with sparse patches of young trees and shrubs. Open areas were generally 0.3 m or less in height and consisted of grasses and trailing herbaceous plants. Shrub/tree clusters were typically less than two meters tall. Open areas were generally smaller than 300 m<sup>2</sup>.

Habitat on site during the January 2007 survey was characterized as early second growth scrub. Scrub patches have become dominant across the study area, varying from 3-5 m in height and at least as wide. The open areas consisted mainly of vines and other trailing herbaceous plants that have grown to between 0.6-1 m tall.

Surrounding and adjacent habitats vary. To the north, the adjoining parcel harbored an abandoned orange orchard. To the west, beyond a mature line of native trees at the fence-line, there was cattle-grazed grassland. South of the study area was the maintained lawn and structures associated with CDCB. East of the study area was a deforested plot of land slated for development. Between this eastern neighbor and adjacent to the southeast corner of the study area there was a small banana plantation and additional structures associated with CDCB. In the gen-

VC= very common    FU= uncommon    C=Common    W= winter  
VU= very uncommon    C= fairly common    S= summer

eral vicinity of CDCB, large-scale habitat was comprised of a patchwork of grazed grassland, orchards, second-growth forest and scrubland, with several ponds and the Mopan River within 2 kilometers of the study area.

As evidenced in the Table 1 (page 2), many species observed use a continuum of habitat types that include open habitats, second growth scrub, and forest edge. Because the study area is transitioning from a more open habitat to a second growth scrub habitat, detecting variation in avian species use at this time is premature.



January 2006



January 2007

Habitat rebound observed at point 22; view looking north.  
Photos: J. Alvarez

There are, however, some interesting observations that have been made. All observations of black vulture, roadside hawk, white-winged dove, and both parrot species were of the birds flying over the site, above the canopy height of the nearby fully-grown trees along the western fence line of the study area. These species were not using the habitat provided within the study area at the time of the surveys for foraging, nesting, or roosting.

Among the species observed in 2006, boat-billed flycatcher, gray catbird, and roadside hawk are not typically associated with the available habitat on the study area. Because roadside hawk was only observed flying over the site, it is unlikely that they were using the site. Gray catbird was recorded during both surveys and seven times more frequently in 2007 than in 2006, suggesting that the habitat suitability may be increasing for this species over time.

In January of 2007, three species typically associated with 2<sup>nd</sup> growth scrub and/or habitats that could be considered “more dense and less open” were observed utilizing the study area. In addition to gray catbird, white-eyed vireo and brown-crested flycatcher were documented during the 2007 survey. White-eyed vireo and brown-crested flycatcher are associated with forest interior and edge and second growth scrub habitats. From our very small sample size, it does appear that a slight shift may be occurring in species richness and density. Although it is difficult to draw conclusions from our observations over only a two-year period, some observations do have merit. First, vegetation density, structural complexity, canopy height, and canopy closure have all increased during the first 18 months of observations. Second, anecdotal observations in and around CDCB—which represents habitat more similar to open grasslands—continue to include Eastern meadowlarks, cattle egrets, melodious blackbirds, boat-tailed grackles and others. These observations show that open-habitat species occur commonly adjacent to the study area, yet used the study

area with only limited frequency or not all. Finally, it is clear that species that are highly associated with sites, which provide complex, extensive, or woody vegetative cover, are increasing in frequency (i.e., gray catbird, white-eyed vireo, brown-crested flycatcher, and common yellowthroat). Future surveys will likely give a clearer indication of any changes in avian species richness as the habitat continues to change.

## Baldemir Manzanero Named In-Country Director of Casa Avian Support Alliance

On January 20th 2007 Baldemir ‘Ricky’ Manzanero was formally recognized by the Executive Board of Casa Avian Support Alliance, LLC, NGO, as the In-country Director and Daily Operations Manager. Please join us in welcoming Ricky to the CASA program; his knowledge and expertise is of inestimable value to the CASA initiative.

Ricky and the project sponsors met in February of 2004 while birding and touring Tikal. The few, short, hours on the site lead to a lasting relationship, and with it Ricky’s willingness to help direct the further development of CASA

While still an employee of the Lodge at Chaa Creek, Ricky resides at Casa Del Caballo Blanco and works closely with eco-lodge staff to encourage and promote synergy between eco-tourism and the ex-situ facility dedicated to the conservation of biodiversity in the Americas.

‘Ricky’ was born and raised in Bullet Tree Falls Village, Cayo District, where he attended the Bullet Tree Falls Roman Catholic School. In 1988 Ricky became involved with tourism while working at Windy Hill Resort. Soon after he began working as a tour guide at The Lodge at Chaa Creek. His heartfelt care and concern for the environment, his exceptional knowledge of avian wildlife, and his knowledge of the cultures that have shaped Belize, have brought him recognition as a premier birding guide and placed him among the best tour guides in Belize.



Ricky birding at Tikal January 2007.

Photo: S. Dexter

## A Brief History of the Habitat Restoration and Reforestation Project

Shortly after acquiring the property in mid-2004, the CASA project sponsors opted to set aside a significant portion of the property for purposes of reforestation and habitat restoration. The area selected constituted the northern 66% of the land, representing approximately 15 acres. That portion of the property is situated on the north-facing slope, is bound by private property on the west (livestock) and north (orange groves), and a municipal road on the east. In the recent past the land had been cropped and used to pasture livestock. A few trees remained along the property boundaries, and three clusters of foliage and an isolated tree or two were located mid-slope.

The entire area was brush-hogged, albeit inadvertently, for the last time in late 2004. After that cutting the grounds were walked to ensure that there were no hazards or signs of dumping that could prove dangerous or hazardous to wildlife. In early 2005 a network of trails were developed with the assistance of a brush-hog; the rail network served to define selected areas of re-growth and clusters of trees.

Reforestation began in mid 2005, under the direction of Mr. Enrique Rivas, with the assistance of Mr. Domingo Mesh, when approximately 500 holes for seedlings were dug, and 35 Mahogany (*Swietenia macrophylla*), 35 Madre de Cacao (*Gliricidia sepium*), 10 May Flower (*Abebuia rosea*), and 100 Cedars (*Cederela odorata*) were planted by Mr. Rivas and Mr. Mesh. At that time it was anticipated that additional Mahogany, Cedar and Madre de Cacao, in addition to Bayleaf (*Sabal mauritiformis*), Red Gumbolimbo (*Bursera simaruba*), Trumpet Tree (*Cecropia peltata*), and Coco Plum (*Chrysobalanus icaco*) would be planted.

In January of 2006 CASA biologists Ms. Wendy Dexter and Mr. Jeff Alvarez, began a sequence of bi-annual observations (see lead story). Data obtained during these observations, will address, among other more specific questions, the progress of the habitat restoration. Within the 15 acres, 8 observation points were selected from which both plant life and wildlife can be monitored

periodically from a consistent location. The observation points were identified after a grid was projected on the site and eight plots were randomly selected (1,6,7,12,18,20,22 and 23).

The following February each observation point was marked with a semi-permanent marker consisting of an up-right three-foot long piece of two-inch diameter PVC cast into a standard concrete building block. Two additional observations, July 2006, and January 2007, have been made from the observation points since they were initially established.

During the first quarter of 2007, January through March, of 2007, CASA's In-country Director, Baldemir 'Ricky' Manzanero undertook further development of the trail system, with the assistance of Mr. Ronnell Manzanero and Mr. Mesh. Currently a hand cut 920-yard trail that forms a loop within the habitat restoration area, links four of the observation points and provides the basis of an interpretive trail network. Smaller, feeder trails will link the remaining four observation points. Signage that will identify many of the trees, shrubs and plants is currently being prepared and will be installed during the month of April.

Avi-fauna sighted and recorded by Mr. Manzanero during the first quarter numbered 33 species in January and February and 25 in March (an incomplete count through the second week that will be updated in the next newsletter). A monthly list of the avi-fauna observed at CASA, by common name, is provided on page 5. Perhaps one of the most exciting sightings was the nest, containing two eggs, of a Common Pauraque along the edge of the trail. While this may not be the first occurrence of wildlife to nest in the habitat restoration area, it is the first to be observed, and a direct demonstration that the habitat is presently viable for selected species of avi-fauna.

In the months to come Mr. Manzanero anticipates completion and improvement of the entire trail, placement of the signage, development of a few watering stations, the construction and placement of nesting boxes for bats and owls, and design and development of a tri-fold brochure providing a map and interpretation of the trail.

## Re-Cycling and Re-Use: CASA and CDCB as a "Demonstration Project"

The property that is today the Casa Avian Support Alliance (CASA) facility, the reforestation area, and Casa del Caballo Blanco (CDCB), was first visited by the project sponsors in February 2004, and subsequently purchased in June 2004. From inception the design and planning for CASA and CDCB has sought means to limit impacts to the surrounding environment, key consideration in this regard were:

- Dedicating approximately 2/3s of the property to a reforestation effort that is intended to attract wildlife and encourage nesting and foraging by resident and migratory avi-fauna;
- Careful consideration of re-using remnant buildings related to the property's prior use as a ranchito, and the presence of a 7<sup>th</sup> Day Adventist Church (active when purchased), as infrastructure of the ex-situ conservation facility and the ecolodge;
- Limitations on the size and amount of construction so as to limit the extensive use of water and energy;
- Under-grounding of all utilities to limit visual impacts to the area, and
- The re-use or donation of materials resulting from the reconstruction, modification, or razing of existing structures.

As such, the CASA/CDCB undertaking serves as a "demonstration project" of the potentials inherent in the 're-cycling' of lands that have previously been used for agriculture.

Today, the northern two-thirds of the property, that had previously been under cultivation, has been planted with a variety of trees, serves as a natural laboratory for the CASA biologists (please see the lead article in this newsletter), provides a nature walk for guests and visitors, and most importantly has returned habitat to local wildlife.

The nexus of structures that will be the hub of the Casa Avian Support Alliance consists of two buildings that had been 'pig-stys,' a water reservoir, and a newly built caretaker's home. Structural timber

## Demonstration Project

from Page 4

and galvanized tin-roofing remaining on one of the pig stys were donated to locals for personal projects (see illustration on page 6). The reservoir once again is filled seasonally with rainwater and will be used for the avi-fauna under care.

The galvanized tin roofing, structural lumber, and ceiling material removed from the 7<sup>th</sup> Day Adventist Church to make way for palm thatch, were donated to the Pentecostal Church in Cristo Rey; the windows were re-cycled in construction of the Caretaker's House, and the block and stone taken from the interior were used as drainage matrix in the soak-away. A small shed of substandard construction and in poor condition was razed; structural lumber and the galvanized roofing were given to a young man to complete his home, and the broken block, concrete and stone from the walls and foundation were also used as drainage matrix in the soak-away.

In sum, the adaptive re-use of the former ranchito buildings, re-cycling of materials from modified or razed structures, and the reforestation and habitat restoration of lands previously used for agriculture serve to identify the CASA/CDCB undertaking as a 'demonstration project,' that underscores the potential to restore habitat and develop new values in and from aged, abandoned, and obsolete development.

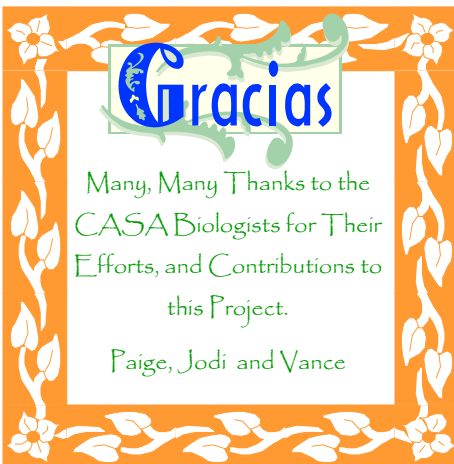
### CASA Biologists Hosted by SHJC: Business, Biology and Eco-Tourism

The evening of January 17, 2007, CASA biologists Ms. Wendy Dexter and Mr. Jeff Alvarez, Ms. Samantha Weber (visiting Conservation Biologist), and Sean Dexter (Archaeologist) addressed students of Sacred Heart Junior College, representing the Departments of Biology, Environmental Science, and International Business, the Marketing and Tourism Programs. The topical presentation, *Business, Biology and Eco-tourism*, was followed by a question and answer discussion period that addressed the inter-dependence and inter-relatedness of the three subject areas. A portion of the presentation reflected on the work being undertaken at CASA

and CDCB that addresses the goal of bio-diversity conservation while supporting the need for sustainable tourism.

Each of the participants offered brief comments relevant to the theme and Jeff Alvarez concluded the program with a 15-minute PowerPoint presentation On "*Endangered Species, the Endangered Species Act of the United States, and Strategies for Conserving Species.*" Following the presentation Ms. Maria Marin, of the SHJC Business Department and Chair of Tourism Management, initiated and directed discussion by posing a sequence of questions relevant to each of the subject areas. A principal theme of that discussion involved identifying how to meld individual interests, expertise and passion, in a manner that provided for meaningful and satisfying employment. As noted by Ms Weber, each practitioner must identify the intersection of their "professional skills and interests" with market demand, whether it be endangered species work, compliance-related field surveys, or involvement with wildlife rehabilitation facilities.

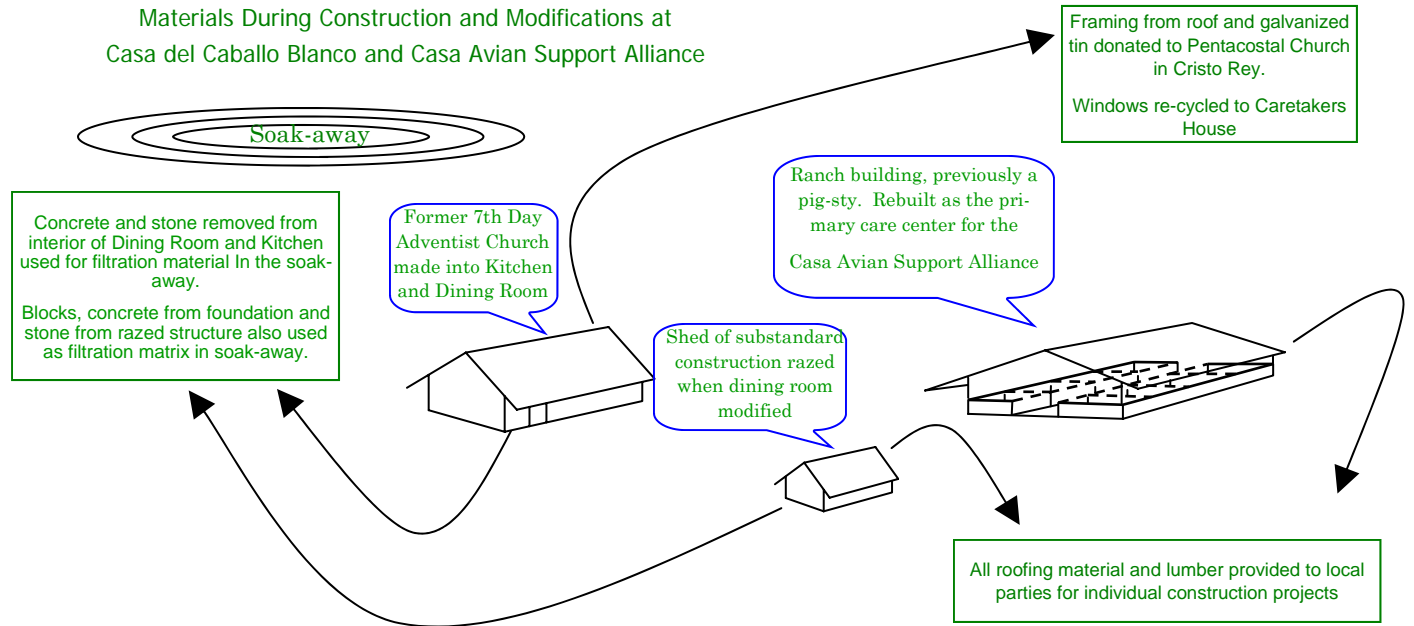
The program was well attended by several students, many of whom voiced interest in the reforestation and avian rehabilitation program at CASA; one individual who wished to participate in any related mammalian studies, and yet others who were interested in continuing the Food And Beverage program at CDCB. In her closing remarks Ms. Weber encouraged the students to recognize "what they love, things that they would do, or already do on their own time for free, and to figure out a way to get a job doing that. People who have a passion for what they do are driven to do it well because they enjoy it and care about it...people you work with or for will see and value that enthusiasm..."



## Avi-fauna Sighted January 01, 2007 through March 15, 2007

January	January (cont)
Melodious Blackbird	Montezuma Oropendula
Cattle Egret	White-fronted Parrot
Great-tailed Grackle	Red-lore Parrot
Grooved-billed Ani	Olive-throated Parakeet
Eastern Meadowlark	White-tailed Hawk
Brown Jay	Great Kiskadee
Golden-fronted Woodpecker	Social Flycatcher
American Redstart	Tropical Kingbird
Common Yellowthroat	Brown-crested Flycatcher
Black-and-white Warbler	Dusky-capped Flycatcher
Blue-gray Gnatcatcher	Rufous-tailed Hummingbird
Gray Catbird	Blue-black Grassquit
Red-billed Pigeon	Ferruginous Pygmy Owl
White-winged Dove	Magnolia Warbler
Ruddy Ground Dove	Plain Chachalaca
House Wren	Scrub Euphonia
February	March
Yellow Warbler	White-fronted Parrot
Rose-breasted Grosbeak	Grooved-billed Ani
Indigo Bunting	Great-tailed Grackle
Blue Grosbeak	Cattle Egret
Rufous-tailed Hummingbird	Eastern Meadowlark
Olive-throated Parakeet	Ferruginous Pygmy Owl
White-fronted Parrot	Great Kiskadee
Red-lore Parrot	Social Flycatcher
House Wren	Brown-crested Flycatcher
Barn Owl	Yellow-bellied Elaenia
Common Pauraque	Orchard Oriole
Magnolia Warbler	American Redstart
Eastern Meadowlark	Common Yellowthroat
Great-tailed Grackle	Olive-throated Parakeet
Melodious Blackbird	Brown Jay
Red-billed Pigeon	House Wren
Ruddy Ground Dove	Scrub Euphonia
Brown Jay	Barred Antshrike
White-collared Seedeater	Rufous-tailed Hummingbird
Yellow-faced Grassquit	Green-breasted Mango (Hummingbird)
Blue-black Grassquit	Grey Catbird
Clay-colored Robin	Clay-colored Robin
Scrub Euphonia	Green-backed Sparrow
Social Flycatcher	Ruddy Ground Dove
Great Kiskadee	Melodious Blackbird
Golden-fronted Woodpecker	
Yellow-throated Warbler	
Yellow-breasted Chat	
White-vented Euphonia	
Plain Chachalaca	
White-eyed Vireo	
Grey Catbird	
Road-side Hawk	

Re-Cycling and Re-Use of Construction Debris and Materials During Construction and Modifications at Casa del Caballo Blanco and Casa Avian Support Alliance



Casa Avian Support Alliance

Birds are the farmers of the world - help us to help them to continue to sow their seeds

Bullet Tree Road, San Ignacio, Cayo Belize, Central America

Phone: 707 780 4544 Fax: 707 780 4546 E-mail: jodi@casacaballoblanco.com

MEMBERSHIP—The Board of Directors for the Casa Avian Support Alliance (CASA) recognizes the value of interested individuals and organizations (both profit and non-profit), as a means to promote the goals of the organization. Memberships are not viewed as a primary source of income with respect to the sustainability of the NGO, but rather as a means to share the mission, goals and accomplishments of CASA with a broader public. Revenues captured from annual dues will be used primarily to support member related activities such as the Badge of Bird Program and the Quarterly Report to Members.

ANNUAL MEMBERSHIP DUES

REGULAR	Membership Description	BZE	US
Student or Sr. Citizen	Currently enrolled or graduated in last two -years	\$5	\$15
Individual	Individual on card plus one other	\$10	\$30
Family	Two or more	\$25	\$50
Participating Professional	Designed primarily for Veterinarians, Ornithologists, and Biologists involved in CASA's programs	\$30	\$60
SUPPORTING			
Affiliate	Members wishing recognition for affiliation	\$100	\$100
Advocate	Members that actively advocate the mission and goals of CASA	\$250	\$250
Patron	Members who wish to contribute to specific programs underway at CASA	\$500	\$500
Benefactor	Individuals who wish to support and promote the mission and goals of CASA	\$1000	\$1000
Guardian	Lifetime membership	\$2500	\$2500
Non-Profit Organization	Organizations with sympathetic missions and goals that would like to support and identify with CASA	\$250	\$250
For-Profit Enterprises	Enterprises who wish to support the mission and goals of CASA and be recognized for the contribution	\$250	\$250

The benefits of membership at the various levels are as follows:

All Regular Memberships receive a membership card, are invited to the annual meeting, receive a quarterly report, are enrolled in the "Passport Program," are listed in the membership directory, have the right to vote on issues put before the membership, and receive 10% discount on items offered in the gift shop.

Supporting Memberships receive the same benefits listed above and are recognized in the annual report for their contribution to the programs and activities of CASA