

Silver-beaked Tanagers

(Ramphocelus carbo)

Cody Hickman



Quick Look at the Family:

Thraupidae

1988

1988 AAZPA Tanager Workshop - Chicago,
IL

What Tanager Prorogation Program in U.S.
Zoos?

Presentation By: Larry C. Shelton, Curator of
Birds at Houston Zoological Gardens

- 1983-1987 -17 species bred and successfully raised chicks in fourteen institutions .
- Only three species exist over 25 birds: Blue-grey Tanager (*Thraupis episcopus*) 8.8.22, Turquoise tanager (*Tangara mexicana*) 11.10.25; Red-Legged honeycreeper (*Cyanerpes cyaneus*) 14.13.3

Questions Paper Asked

- Which species to work with?
 - Silver-beaked Tanager (*Ramphocelus carbo*)
 - Turquoise Tanager (*Tangara mexicana*)
 - Blue-grey Tanager (*Thraupis episcopus*)
- Record of successfulness?
 - Brazilian Tanager (*Ramphocelus bresilius*)
 - Silver-beaked Tanager (*Ramphocelus carbo*)
 - Diademed Tanager (*Stephanophorus diadematus*)
- 1988 population?
 - Only three species exist over 25 birds: Blue-grey Tanager 8.8.22, Turquoise tanager 11.10.25; Red-Legged honeycreeper 14.13.3 (ISIS - 1987)

Other Successful Tanager Species

Breeding Tanagers at Woodland Park Zoo

By: Gregory S. Toffic, Curator of Birds - Woodland Park Zoo

- Species Breed in 1970 - Blue-grey Tanager (*Thraupis episcopus*), Brazilian Tanager (*Ramphocelus bresilius*).
- Species Breed in 1984 - Bay-headed Tanager (*Tangara gyrola*) - produced 5 successful clutches; silver-throated Tanager (*Tangara icterocephala*) - produced one successful clutch and, Golden Tanager (*Tangara arthus*) produced 4 clutches.

Thraupinae Reviewed at Brookfield Zoo

By: Lucy Greer, Bird Department - Brookfield Zoo

- Successful Breeding Species

- Blue-grey Tanager (*Thraupis episcopus*)
- Flame-faced Tanager (*Tangara parzudakii*)
- Golden Tanager (*Tangara arthus*)
- Golden-eared Tanager (*Tangara chrysotis*)
- Paradise Tanager (*Tangara chilensis*)
- Turquoise Tanager (*Tangara mexicana*)
- Purple Honeycreepers (*Cyanerpes caeruleus*)

Introduction

- Family - Thraupidae
- There are 95 genera with 375 species.
- Number is changing due to molecular testing .
 - Examples: Genus Piranaga-Northern Tanager (9 species) including : Summer Tanager (), Scarlet Tanager (), and Western Tanager() has moved to the Family Cardinalidae
 - Example: Genus Paroria- Red-headed Cardinals (6 species) was in the Family Emberizidae.

Family: Thraupidae

Genus: *Sicalis*

Members: 12 species

- *Sicalis flaveola* Saffron Finch
 - America - 30.32.23 (21)

Genus: *Sporophila*

Members: 55 species

- Variable Seedeater (*Sporophila americana*)
 - America - 4.1.0 (2)
- Variable Seedeater (*Sporophila americana aurita*)
 - America - 4.0.0 (2)

Genus: *Sporophila*

Members: 55 species

- Variable Seedeater (*Sporophila americana*)
 - America – 4.1.0 (2)
- Variable Seedeater (*Sporophila americana aurita*)
 - America – 4.0.0 (2)
- Lined Seedeater (*Sporophila lineola*)
 - America – 3.2 (1)
- Parrot-billed Seedeater (*Sporophila peruviana*)
 - America – 2.2.0 (2)

Genus: Tachyphonus Members: 8 species

– Red-shouldered Tanager (*Tachyphonus phoenicius*)

– America – 0.1.1 (1)

– White-lined Tanager (*Tachyphonus rufus*)

– America – 6.2.0 (6)

– Fulvous-crested Tanager (*Tachyphonus surinamus*)

– America – 1.0.0 (1)

Genus: Stephanopharus Members: 1 species

– Diademed Tanager (*Stephanopharus diadematus*)

– S. America – 0.0.1 (1)

Genus: *Gubernatrix*

Members: 1 species

- Yellow Cardinal (*Gubernatrix cristata*)
 - America ~ 0.0.1 (1)

Genus: *Piezorhía*

Members: 1 species

- Cinereous Finch (*Piezorhina cinerea*)
 - America ~ 3.2.4 (1)

Genus: *Melopyrrha*

Members: 1 species

- Cuban Bullfinch (*Melopyrrha nigra*)
 - America 0.0.1 (1)

Genus: *Buthraupis*

Members: 4 species

- Blue and Gold Tanager (*Buthraupis arcaei*)
 - America 1.0 (1)

Genus: *Anisognathus*

Members: 5 species

- Blue-winged Mountain Tanager (*Anisognathus somptuosus*)
 - America - 1.1.2 (2)

Genus: *Lophospingus* Members: 2 species

- Black-crested Finch (*Lophospingus pursillus*)
 - America ~ 0.0.3 (1)

Genus: *Schistochlamys* Members: 2 species

- Black-faced Tanager (*Schistochlamys melanopis*)
 - America ~ 1.0.0 (1)
- Black-faced Tanager (*Schistochlamys melanopis grisea*)
 - America ~ 0.1.0 (1)

Genus: *Tersina*

Members: 1 species

- Swallow Tanager (*Tersina viridis*)
 - America - 1.0.0 (1)
- Swallow Tanager (*Tersina viridis occidentalis*)
 - America - 1.0.0 (1)

Genus: *Coereba*

Members: 1 species

- Bananaquit (*Coereba flaveola*)
 - America - 10.8.2 (7)
- Bananaquit (*Coereba flaveola bananivera*)
 - America - 0.1.6 (1)

Genus: Dacnis

Members: 8 species

- Blue Dacnis (*Dacnis cayana*)
 - America ~ 8.11.0 (10)

- Black-faced Dacnis (*Dacnis lineata*)
 - America ~ 1.1 (1)

Genus: Chlorophanes

Members: 1 species

- Green Honeycreeper (*Chlorophanes spiza*)
 - American ~ 1.1 (1)
- Green Honeycreeper (*Chlorophanes spiza spiza*)
 - America ~ 1.3 (2)

Genus: *Cyanerpes*

Members: 4 species

- Purple Honeycreepers (*Cyanerpes caeruleus chocoanus*)
 - America 0.2.0 (1)
- Red-legged Honeycreepers (*Cyanerpus cyaneus*)
 - America - 9.16.2 (11)

Genus: *Paroaria*

Members: 6 species

- Yellow-billed Cardinal (*Paroaria capitata*)
 - America - 3.4.2 (6)
- Red-crested Cardinal (*Paroaria coronata*)
 - Europe - 6.3.3 (9)
 - America - 38.27.10 (27)
- Red-cowled Cardinal (*Paroaria dominicana*)
 - Europe - 25.24.3 (13)
- Red-capped Cardinal (*Paroaria gularis*)
 - Europe - 1.0.0 (1)
 - America - 25.36.10 (21)
- Red-capped Cardinal (*Paroaria gularis cervicalis*)
 - America - 2.1.0 (2)
- Red-capped Cardinal (*Paroaria gularis gularis*)
 - America - 4.13.0 (2)

Genus: Tangara

Members: 55 species

- Golden Tanager (*Tangara arthus*)
 - American - 0.1.3 (2)
- Golden Tanager (*Tangara arthus occidentalis*)
 - American - 1.1.0 (1)
- Rufous - crowned Tanager (*Tangara cayana*)
 - America - 5.11.4 (5)
- Paradise Tanager (*Tangara chilensis*)
 - America - 25.12.0 (8)
- Paradise Tanager (*Tangara chilensis chilensis*)
 - America - 2.2 (2)
- Paradise Tanager (*Tangara chilensis paradisea*)
 - America - 2.4.1 (2)

- Blue-leeked Tanager (*Tangara cyanicollis*)
 - America - 5.4.2 (6)
- Blue-leeked Tanager (*Tangara cyanicollis caeruleocephala*)
 - America - 4.5.1 (3)
- Bay-headed Tanager (*Tangara gyrola*)
 - America - 3.4.0 (6)
- Bay-headed Tanager (*Tangara gyrola catharinae*)
 - America - 3.0.0 (2)
- Silver-throated Tanager (*Tangara icterocephala*)
 - Europe - 4.0.0 (1)

- Turquoise Tanager (*Tangara mexicana*)
 - Europe ~ 5.2.3 (6)
 - America ~ 21.17.4 (11)

- Turquoise Tanager (*Tangara mexicana mexicana*)
 - America ~ 7.3.4 (6)

- Spotted Tanager (*Tangara punctata*)
 - America ~ 0.1.0 (1)

- Spotted Tanager (*Tangara punctata punctata*)
 - America ~ 8.4.0 (4)

- Green and Gold Tanager (*Tangara schrankii*)
 - America ~ 3.1.1 (3)

- Green and Gold Tanager (*Tangara schrankii schrankii*)
 - America ~ 3.1.0 (3)

• Genus: *Thraupis* Members: 9 species

- Blue and Yellow Tanager (*Thraupis bonariensis*)
 - America ~ 2.6.1 (5)
- Blue-grey Tanager (*Thraupis episcopus*)
 - Europe ~ 5.6.3 (5)
 - America ~ 57.46.14 (36)
- Blue-grey Tanager (*Thraupis episcopus quaesita*)
 - America ~ 1.0.0 (1)
- Palm Tanager (*Thraupis palmarum*)
 - America ~ 1.1.1 (3)

• Genus: Ramphocelus

Members: 9

- Brazilian Tanager (*Ramphocelus bresilius*)
 - Europe – 40.36.10 (23)
 - America – 2.5.0 (5)
- Silver-beaked Tanager (*Ramphocelus carbo*)
 - Europe – 3.3.0 (4)
 - America – 26.23.7 (19)
- Crimson-backed Tanager (*Ramphocelus dimidiatus*)
 - America – 2.0 (2)
- Flame-rumped Tanager (*Ramphocelus flammigerus*)
 - America – 0.0.3 (1)

Total Number

Of the 21 genre and 45 species that are represented in American zoos only 6 species consisting of 5 genre have a population of 50 or more birds.

Why so little number of Tanagers?

- Price
- Availability
 - Certain species are not available.
 - Birds are only being exported out of two countries.

- In 1988 it was stated in Patricia McGill paper Captive Management of Tanagers: Panel Discussion that “forty two species of tanagers currently in captivity are represented by small numbers of individuals” (McGill, 1988).

It was recommended to “increase the number of individuals in captivity of one to three species that are abundant in the wild” (McGill, 1988)

Silver-beaked Tanager
(Ramphocelus carbo)

Cody Hickman



Taxonomy

Class: Aves

Order: Passeriformes

Family: Emberizidae

Subfamily: Thraupinae

Genus: Ramphocelus

Species: Ramphocelus carbo

Sub-species:

- *Ramphocelus carbo carbo*
- *Ramphocelus carbo magnirostris*
- *Ramphocelus carbo capitalis*
- *Ramphocelus carbo connectens*
- *Ramphocelus carbo centralis*
- *Ramphocelus carbo atrosericeus*
- *Ramphocelus carbo venesuelensis*
- *Ramphocelus carbo unicolor*

Common name:

Silver-beaked Tanager

Trinidad Silver-beaked Tanager

Venezuelan Crimson-headed Tanager

Peruvian Silver-beaked Tanager

Brazilian Silver-beaked Tanager

Bolivian Silver-beaked Tanager

Venezuelan Silver-beaked Tanager

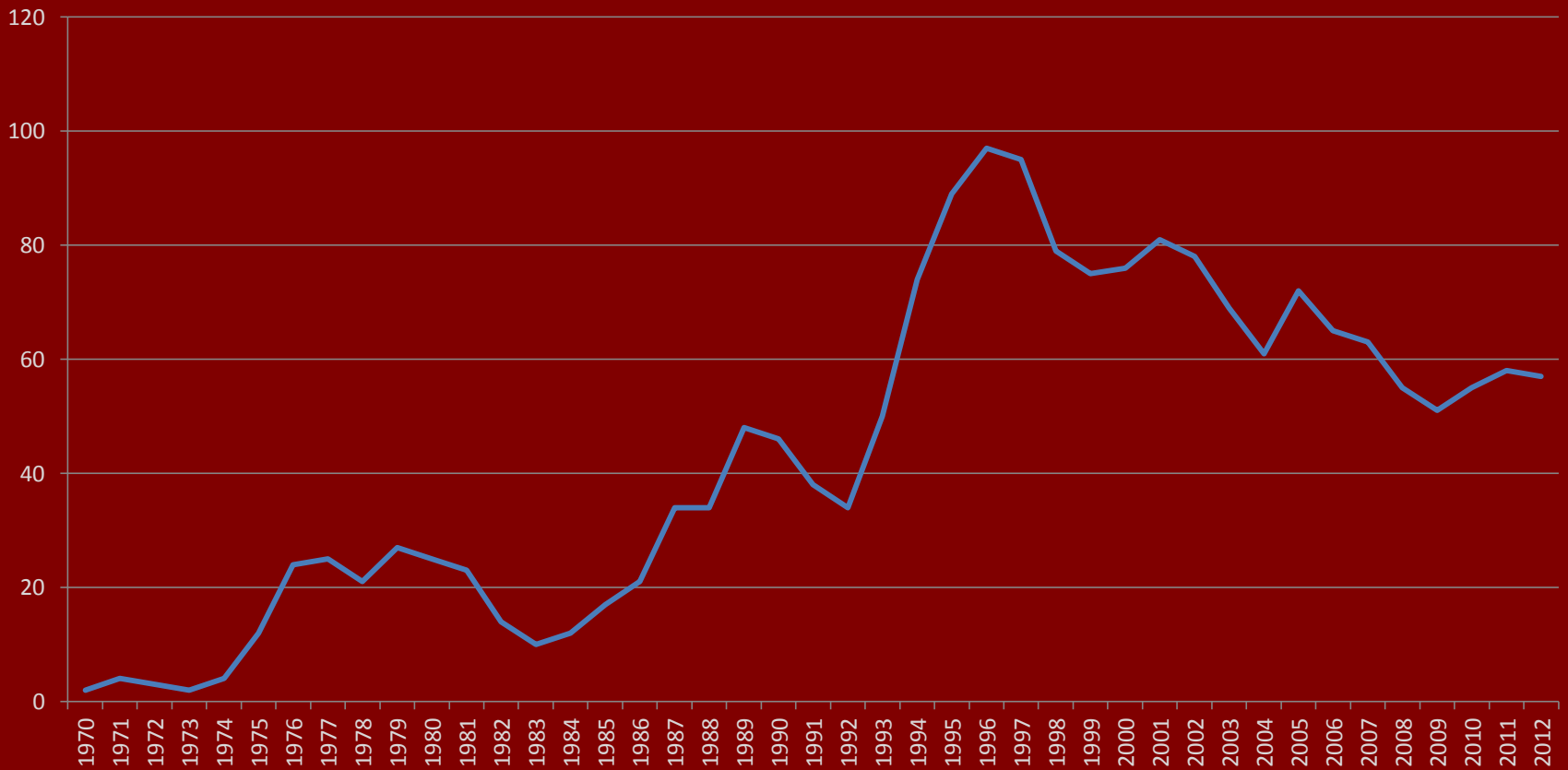
N/A

First Breeding

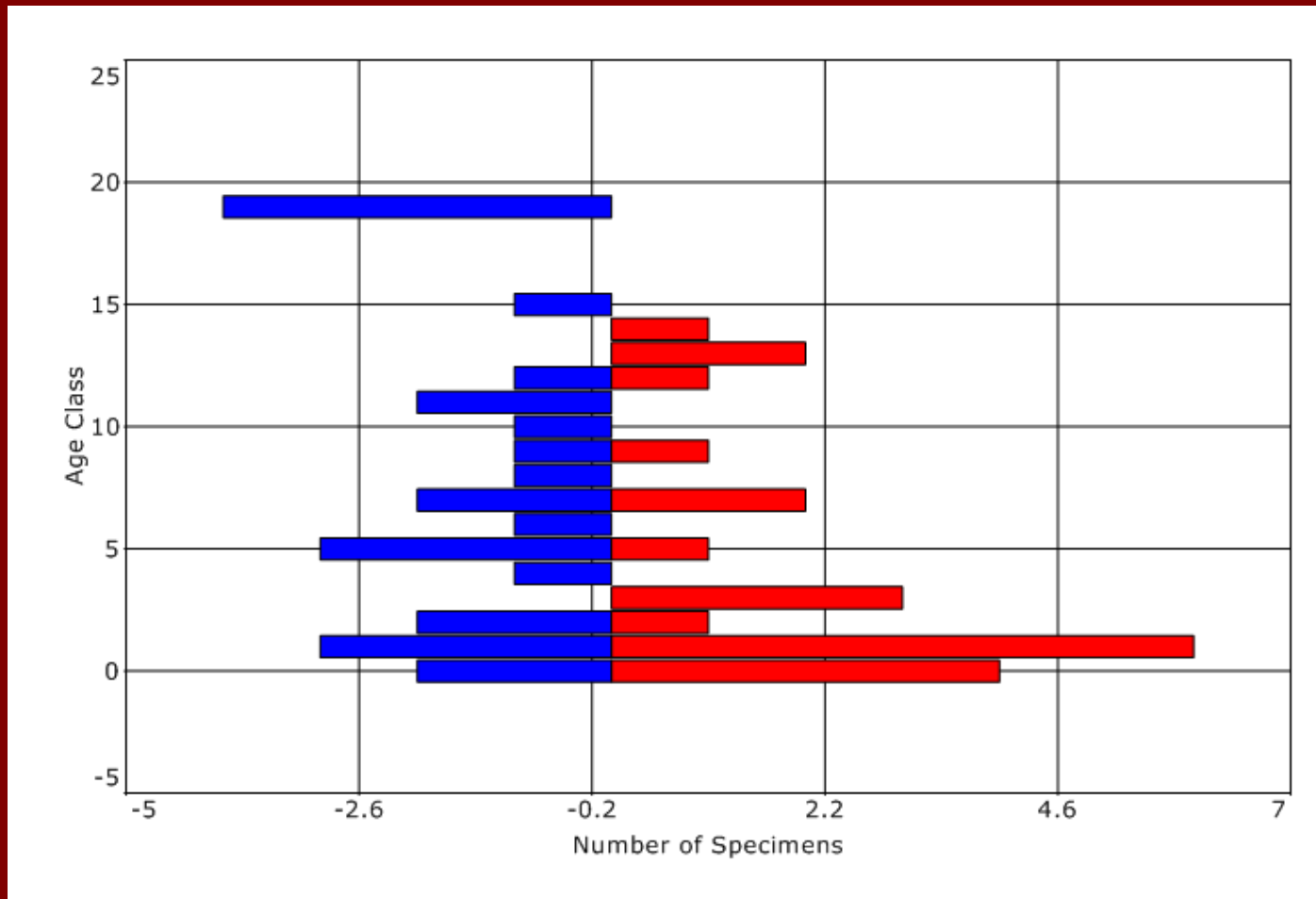
- Silver-beaked Tanager First Breeding
 - San Diego Zoo on April 14, 1943 individual lived until Sept 23, 1949.
 - No recorded breeding again until Houston Zoo in 1970, 1982; Brookfield in 1980; and Lincoln Park 1981, 1982.
 - In Europe the first breeding occurred in 1977 compared to Brazilian Tanager (*Ramphocelus bresilius*) which occurred in 1912.

Population Trend

Silver-beaked Tanager Population



Age Pyramid



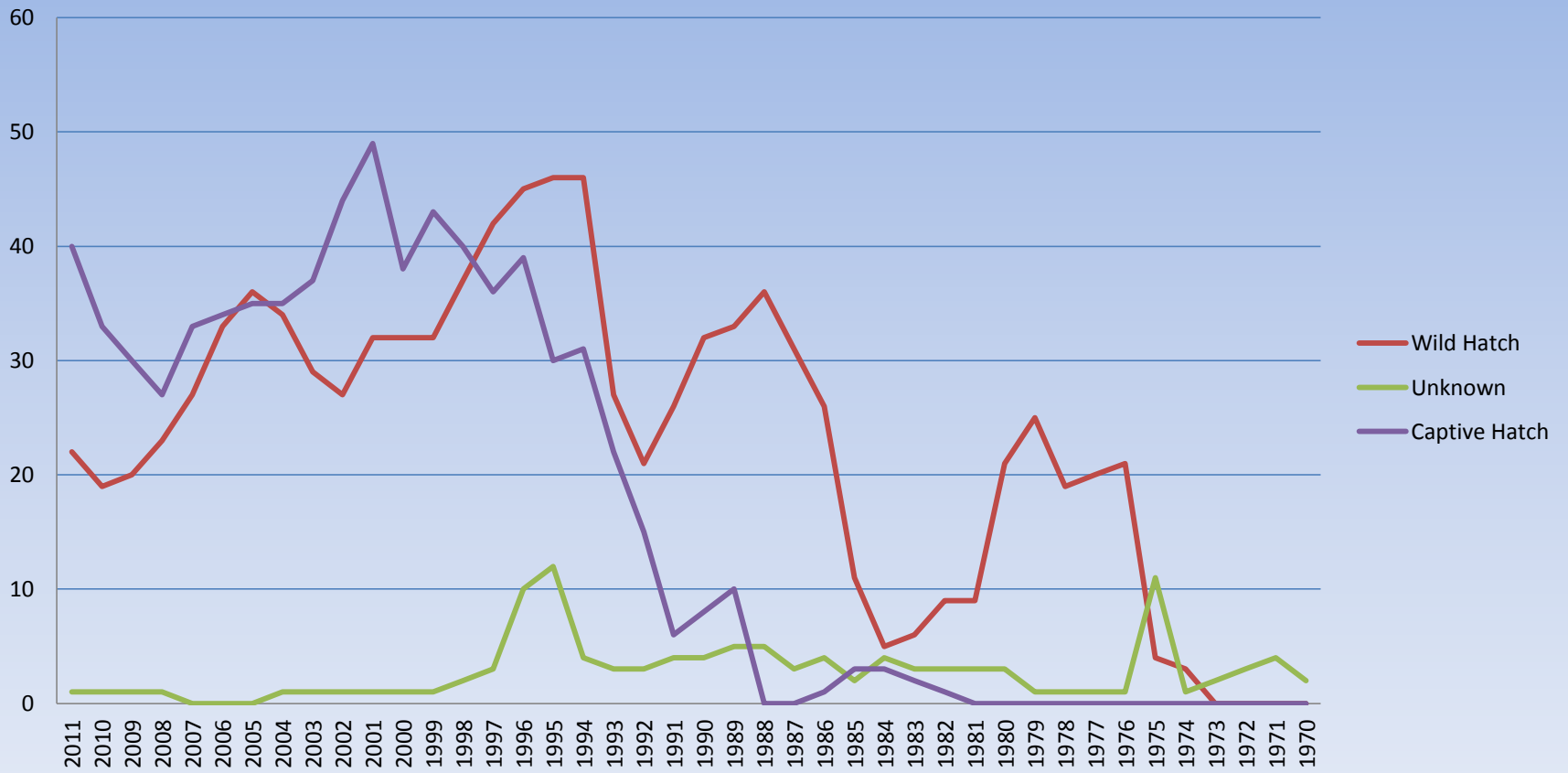
Demographics: 24.21.3

Historical and Current

Population

- The population reached 52 in 1993.
- The largest population was reached in 1996 with 98 individuals.
- Current Population in 2012 is 50.

Wild Hatch vs. Captive Hatch



Offspring

- Offspring in the past 5 years.
 - 2008 : 10 chicks
 - 2009: 16 chicks
 - 2010: 11 chicks
 - 2011: 11 chicks
 - 2012: 3 chicks

Hatching

- Breeding can occur all year but the most productive months occur May – July.

Exporting

- *Trinidad, Ecuador, Peru, Costa Rica and Suriname.*
- *Sustainability- This species is exported from Suriname and has a sustainable population in the wild.*

Eggs

- Silver-beaked Tanager lay 1-2 eggs but according to data usually 1 egg.
 - Steinhart Aquariums has never had less than two eggs.
- If allowed they will lay multiple clutches. To avoid health issues associated with multiple clutches calcium supplement should be given.

Fledging

- Females will incubate two to three blue to greenish-blue eggs flecked with blackish-brown for approximately 12 days (Isler and Isler, 1987). Both parents feed the chicks which will fledge in approximately 12 to 14 day (Pingry, 2000).
- Steinhart Aquarium eggs hatch around 10 and 11 days and fledge after 10 days.

Age

Females

Studbook ID	Current Sex	Hatch Type	Current Age	Current Age Est.	First Location	Current Location
418	Female	Captive Hatch	14.056	None	TORONTO	TORONTO
468	Female	Wild Hatch	13.366	Year	UNKNOWN	SEATTLE
467	Female	Wild Hatch	13.366	Year	UNKNOWN	SEATTLE
449	Female	Captive Hatch	13.065	None	NZP-WASH	HOUSTON
498	Female	Wild Hatch	11.997	Year	UNKNOWN	LOWRY
638	Female	Wild Hatch	9.325	+/- 2 Years	PRIVATE	STEINHART
717	Female	Wild Hatch	7.072	None	WILD	NASHV ZOO
715	Female	Wild Hatch	7.072	None	WILD	NASHV ZOO
621	Female	Captive Hatch	4.991	Day	ST PAUL	ST PAUL
655	Female	Captive Hatch	3.699	None	STEINHART	TOLEDO

Median Life Expectancy: 5.4 years

Age

Males

Studbook ID	Current Sex	Hatch Type	Current Age	Current Age Est.	First Location	Current Location
203	Male	Wild Hatch	19.882	Year	SURINAM	PROVIDNCE
201	Male	Wild Hatch	19.882	Year	SURINAM	SEATTLE
232	Male	Wild Hatch	19.31	Year	S.AMERICA	DENVER
233	Male	Wild Hatch	19.307	Year	UNKNOWN	NZP-WASH
352	Male	Captive Hatch	15.411	None	NZP-WASH	NZP-WASH
489	Male	Captive Hatch	12.279	Day	TORONTO	TORONTO
518	Male	Captive Hatch	11.376	Day	HOUSTON	HOUSTON
531	Male	Captive Hatch	11.179	None	SEATTLE	SEATTLE
566	Male	Wild Hatch	10.07	Year	UNKNOWN	MEMPHIS
580	Male	Wild Hatch	9.15	Year	UNKNOWN	ST PAUL

Median Life Expectancy: 6.6 years

Breeding Age

Female

- Age of youngest female to lay eggs was .79 years old with the mean age for laying first clutch being 3.48 years old.
- Age of oldest female to lay was 15 years old.

Breeding Age

Male

- Youngest male: 1.5 years
 - Mean age: 3.8 years
- Oldest male: 19.8 years

Population

- Individual breeding in the population.
 - 19% of the individuals are breeding
 - Goal is 30%
- Maintain population
 - 15-17 birds need to be introduced
- Increase the population
 - 18 - 22 birds need to be introduced

Mortality

- First month Mortality:
 - Males: 51%
 - Females: 48%
- First Year Mortality:
 - Males: 67%
 - Females: 61%

High Mortality

Boom or Bust Population

- Exhibits
 - Free flight
 - Multiple species
- Parasite
 - Atoxoplamosis

Husbandry

- Diet
- Exhibits
- Group dynamics
- Breeding
- Medical Issues

Diet

In the wild diet consist of “50% insects, 45% fruit and, 5% nectar” (Isler and Isler, 1987).

Tulsa Zoos Diet:

- Softbill Pellets
- Fruit salad
- Fruit mix
- 4 Crickets
- 10 Mealworm
- 4 Waxworms
- 2 Superworms

We try to follow “50% fruit, 33% softbill pellets, 10% chopped hard-boiled eggs, 5% greens, and 2% live food” (Vince, 1996).

We treat the diet with tea to help with hemochromatosis.

Exhibits

- Large free flight exhibit w/ multiple species.
- Smaller exhibits
 - 9* 5* 8 reported by Kathy Pingry in Silver-beaked Tanager Studbook .
 - 9.8* 5* 6.5 reported in 2006 EAZA Husbandry Guidelines for Tanagers, Honeycreepers and Euphonias
 - Smallest exhibit was 6* 8 * 8 reported by Robert Webster

Exhibit

- It has been reported that lush vegetation in exhibits has improved breeding for this species of tanager.
- It has also been suggested that moving tanagers from a sparse environment with no plants and enrichment to a heavily planted aviary with lots of food especially bugs can trigger breeding activity (Harris, 1987)

Fledging

- Large open exhibit with multiple species = high mortality for fledging.
 - Fledging Cage - if possible is a great tool for young birds.

Group Dynamics

- Silver-beaked Tanager will show male/male aggression:
 - Male/Female
 - Male/Mult Females
 - Female group

“The silver-beaked tanager, and surprisingly, the violaceous euphonia males killed the other resident males of their species within days upon release” (McCloskey, 2011).

Group Dynamics

- National Zoo housed 5 males in a exhibit with multiple females.
- Its recommend not to house bachelors groups or multiple male due to aggression.

Breeding

- Induced breeding
 - Exhibit with lush vegetation
 - Multiple nesting sites available.
 - Exhibit appropriately sized.
- Housing silver-beaked tanagers in free flight exhibit and also housing a pair in a smaller exhibit/off exhibit area were more intense management can occur.

Medical Issues

- Atoxoplasmosis
 - Manageable
 - contributes to high mortality rate.

Resources for treatment:

Eastern Regional AZA Conference, Columbia, SC held March 27, 2009

- <http://www.riverbanks.org/subsite/aig/baliopen.htm>

Blue-crowned Laughingthrush (*Dryonastes courtoisi*) AZA Red Program

- <https://ams.aza.org/iweb/upload/LaughingthrushBlueCrownedRedProgram2012Final-3c066a69.pdf>

Bad News

- Population
 - Over represented birds
 - Not enough birds
 - Population is in decline

Good News

- Species is very abundant in the wild.
 - Bird Express
 - \$129.00 per bird
- Zoos are interested in the species.
 - Easy to breed
 - Lives well in multiple species exhibit

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