



AZA Population Management Center Update

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speaker notes in italics

PMC Population
Management
Center

 LINCOLN PARK ZOO.

ASSOCIATION
OF ZOOS &
AQUARIUMS

AZA Population Management Center at Lincoln Park Zoo



Consultant
Population
Biologists

AZA office

Adjunct
Population
Biologists



**Kristine
Schad**
Director



**John
Andrews**
Population
Biologist



**Amanda
Lawless**
Associate
Population
Biologist



Paul Senner
Associate
Population
Biologist



Nicolette Sra
Associate
Population
Biologist



**Kelvin
Limbrick**
Studbook
Analyst



**Kayla
Melton**
Research
Assistant

AZA Population Advisors

PMC Consultants

- Colleen Lynch, M.S. – Riverbanks Zoo & Gardens
- Cara Bryan, M.S. – Chicago

Adjunct Population Biologists

- Ed Spevak, PhD – Saint Louis Zoo
- Jamie Ivy, PhD – San Diego Zoo Global
- Andrea Putnam, PhD – California zoos & aquariums
- Gina Ferrie, M.S. – Disney's Animal Kingdom
- Tom Ness, M.S. – Minnesota Zoo
- Jennifer Mickelberg, PhD - Zoo Atlanta
- Katelyn Mucha, M.S. – Species360
- Sara Sullivan, M.S. – Brookfield Zoo

Since the PMC was started, Columbus is the first zoo to single-handedly fund a new full time PB position.



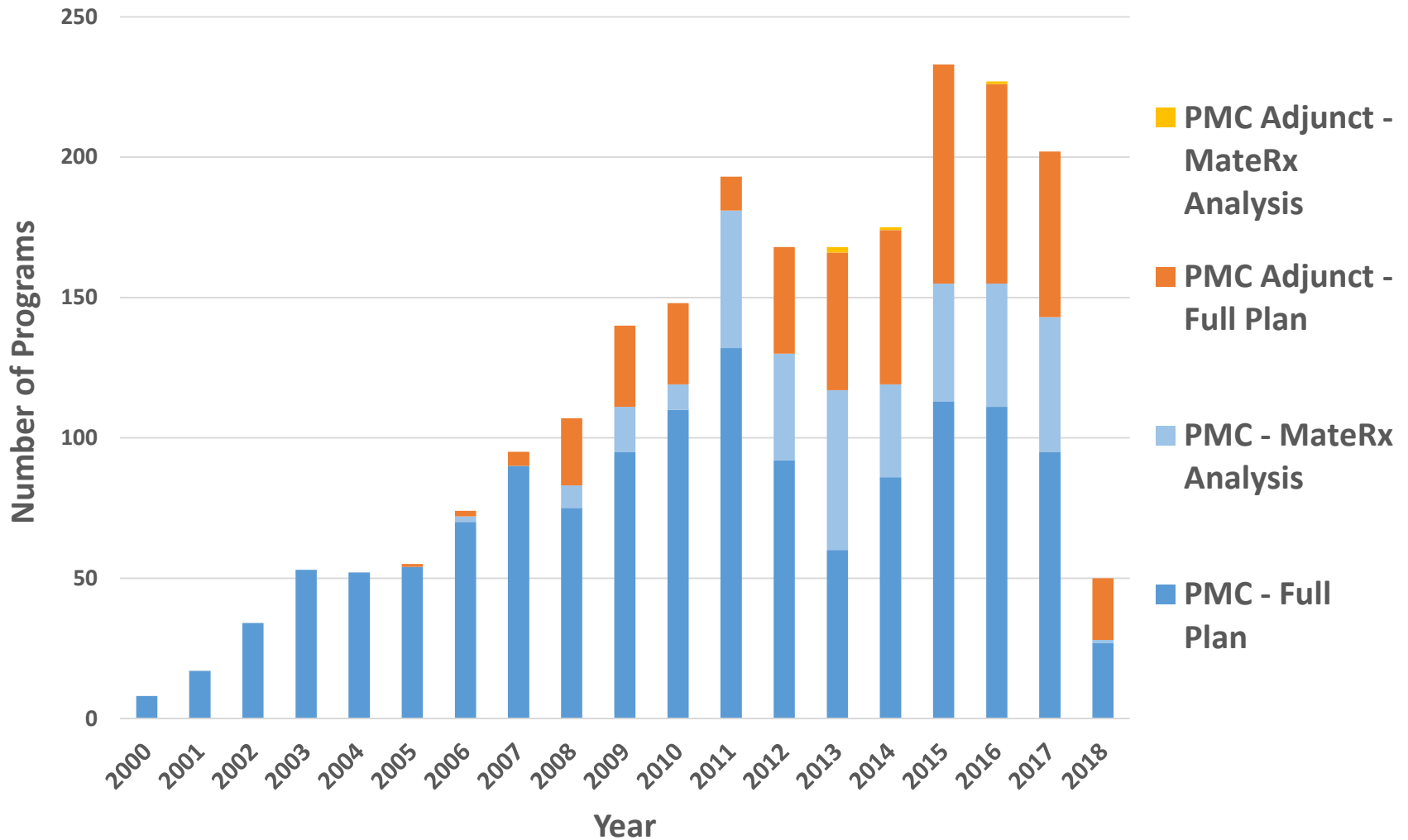
Saint Louis Zoo
Animals Always®



MINNESOTA ZOO



PMC Staff and Adjunct Output: Number of Final and MateRx Reports per Year



*Data as of 3/20/2018

2009 – 2011: Increased levels were due to an extra biologist position funded from the PMCTrack IMLS grant (Anne Oiler/Katelyn Marti).

In every year except 2007 & 2011 the PMC has had new staff to train (due to turnover or new positions in 2008, 2009, 2013, 2014). Peak productivity was in ~2011 when there were three fully trained staff (Kristin, Cara, Katelyn). AZA re-prioritization and setting up the PMC's schedule also set back productivity in 2013 – 2014. ZIMS may do so in 2016/2017?

New staff trained:

2000 – SL, CL – two population biologists,
one studbook analyst

2004 – LB (was SA)

9/2006 – KS (was SA)

10/2008 – CG (new) – new position,
100% AZA funded

1/2009 – AO (was PL) – new position,
IMLS funded

2/2010 – KM (new – turnover in IMLS
position)

**Add in what staff changes you want.

***Raw numbers needed?

Full numbers are in Spreadsheet if need be.

Quick summary of totals for last 5 full years:

2018- 50 (so far) 2015- 233

2017- 202 2014- 175

2016- 227 2013- 168

9/2012 – SS (new – replaced Cara)

2013 – Kristine left/Katelyn hired, JR (new)
– new position, 100% Columbus
funded

2014 – JA (new) – new position, 100%
AZA funded

Oct 2015 – KM leaves

Mar 2016 – AL hired to replace KM

Animal Programs

PMC/Adjunct Impact

2000 - 2018

614

3886

Reports

> 338,000

People

2969

654
(222 in AZA)

Animal Recommendations*

Institutions

Current to March 22 2018 from Kayla Melton

*** Are only current to April 2017 by Kaitlyn (animal recommendations and institutions)**

RECOMMENDATIONS

Used a massive download file obtained from programmers in April 2017

Currently there isn't a report in PMCTrack that includes all the recs in the system, just those for which we have calculated outcomes, so this April 2017 download is the most accurate source for this question at this point

Does not include "OTHER" recs

Includes recommendations for AZA & non-AZA institutions

Total of **338,640** recommendations (individual disposition + breeding recs) in PMCTrack as of April 2017

REPORTS

Used the PMCTrack Projects – Detailed Report (current to 3 Aug 2017)

Includes full plans, MateRx reports, TAG Analysis reports by PMC, PMC Adjunct, and OTHER advisors (SPMAG)

Does not include closed-incomplete, request only projects

Does not include Studbook publications (we don't really produce these so much as the SK does), "Other" projects, validate for PM2 projects, and plan reviews (these are internal and not distributed as formal reports)

2,441 reports produced

PEOPLE

Used the People with Roles in PMCTrack Report (current to 3 Aug 2017)

Includes people who have ever held a program role in PMCTrack (ILs, PLs, Studbook Keepers, IRs, TAG Chair, WCMC Liaison, AZA, PMC, Studbook Analysts)

2920 people, total (duplicates removed for folks with more than one role)

2889 people when AZA, PMC, Studbook Analysts removed from list

ANIMAL PROGRAMS

Used the PMCTrack Projects – Detailed Report (current to 3 Aug 2017)

Includes full plans, MateRx reports, TAG Analysis reports, and Validations for PM2 (since these are helpful for SKs) by PMC, PMC Adjunct, and OTHER advisors (SPMAG)

Does not include “Other” projects or studbook publications

Does not include closed-incomplete or request only projects

612 programs assisted

These include species that are “no longer programs” according to AZA, DERPs, “To Be Determined” programs, Candidate programs, PMPs, SSPs, Red Programs, Yellow SSPs and Green SSPs

605 programs assisted if the “no longer program” programs and “to be determined” programs are removed

ZOOS

Not sure how to quantify this one, so I took a look at the list of all zoos that have ever received a recommendation in a final breeding and transfer plan (from the April 2017 download)

OTHER recommendations not included (only HOLD, SEND TO, BREED WITH, DO NOT BREED, SEE MATERX recs)

654 institutions (including private and non-AZA institutions) have received some form of a recommendation in a BTP since the year 2000

*If only including **current** AZA institutions, that number becomes **222** that have received some form of a recommendation in a BTP since the year 2000*

*Current to May 2016 From Kaitlyn
Including all Full Plans, MateRx Reports, Plan Reviews, TAG Analyses, and Validate for
PM2 programs, **568 unique programs** have received some type of PMC or PMC
Adjunct assistance*

Reports produced =

PMC ONLY NUMBERS

1,143 final Full Plans produced

For 393 unique programs

274 final MateRx reports produced

50 Plan Review projects

136 Studbook Publications

140 TAG Analysis projects

285 Validate for PM2 projects

TOTAL = 2028

ADJUNCTS

385 additional final plans (85 additional unique programs)... not added in to bubbles

A handful of the additional MateRx, 2 reviews, 2 TAG analyses...not added in anywhere

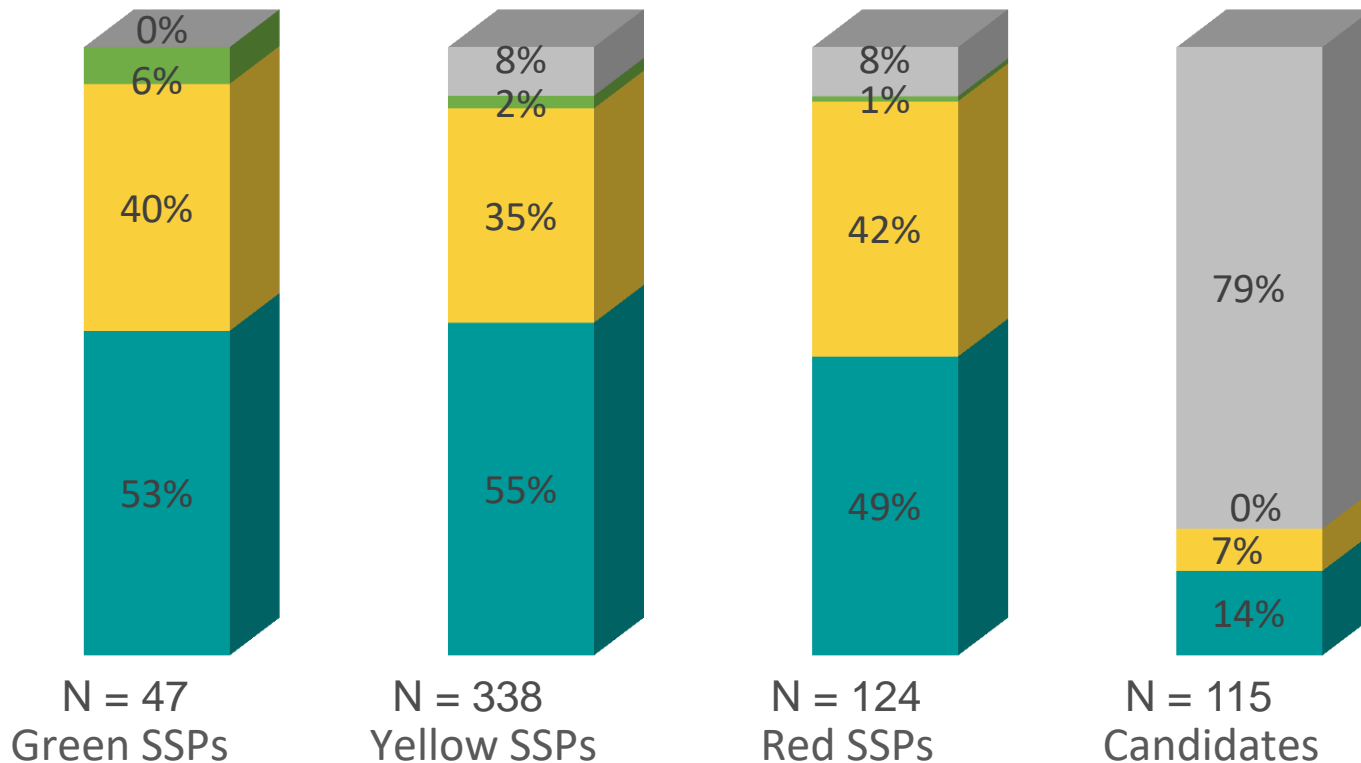
Numbers for people and zoos are from 2014.

AZA Populations Requiring Assistance *(there's always more work too do!)*

Total SSPs and Candidates (N=624)



■ PMC ■ Adjunct ■ SPMAG ■ not planned yet



Current to March 2018

New Notes: Total = 101% due to rounding of Adjunct and SPMAG. Green SSPs =99% due to rounding of Adjunct and SPMAG

[Some are closed incomplete (Aardvark, Golden Conure, Harpy Eagle). Most are candidate programs that were newly added or have not been prioritized for planning as of yet. Vast majority do not have PLs. Also, some are currently going through their first planning session (Agouti for example) so they are going to be planned but nothing is final yet.] – note from sept 2017 still holds true.

Anoa GSMP



GLOBAL SPECIES MANAGEMENT PLAN

ANOA

- 2nd meeting, along with Banteng and Babirusa GSMPs in January 2018, in Indonesia
- John, PMC, participated by:
 - Analyzing Anoa GSMP population
 - Helping create a breeding and transfer plan with GSMP members
 - First time Indonesian zoos attended
 - Leading a subgroup discussion on population management



John Andrews, PMC



Yohana Tri Hastuti,
Studbook Keeper, PKBSI



Blue-crowned Laughingthrush GSMP

- 5th meeting in October 2017, in Germany
- Colleen Lynch, PMC Consultant
 - Analyzed population
 - Helped create a breeding and transfer plan with GSMP members
- Population growth has improved since starting the GSMP



Photo © by Xie Xiao-fang



Population Management Center



GLOBAL SPECIES MANAGEMENT PLAN



World Association of Zoos and Aquariums | WAZA
United for Conservation



GSMP Meeting participants

AZA Reproductive Management Center

- Reproductive Health Surveillance Program (RHSP)
 - Reference in most mammal SSP Breeding and Transfer Plans
- RMC staff may attend SSP planning meetings needed and availability allows
- Reproductive Viability Analysis (RVA)
 - Determines attributes of individuals and pairs that are associated with reproductive success
- Lifetime Reproductive Planning (LRP)
 - Population-level recommendations that could be incorporated into management decisions
- Contraception database
 - Gathers information on contraception use, efficacy, reversals to provide contraceptive advice to zoo veterinarians, curators, SSP Program Leaders, etc.
- *Met in November to discuss how the two AZA Centers can work together more effectively*
- *RMC is not here today, so...Monica, Ashley, and David*



ZIMS for Studbooks: Letter to Program Leaders, from WCMC in February

- Sign up for sandbox testing area of ZIMS for Studbooks
 - Anyone can sign up
 - View your studbook in ZIMS for Studbooks
 - Learn about ZIMS for Studbooks
- Monthly webinars offered by Species360
- PMC and Adjuncts will help test and guide the Studbook Keepers during migration
 - Help decide when is the best time to migrate

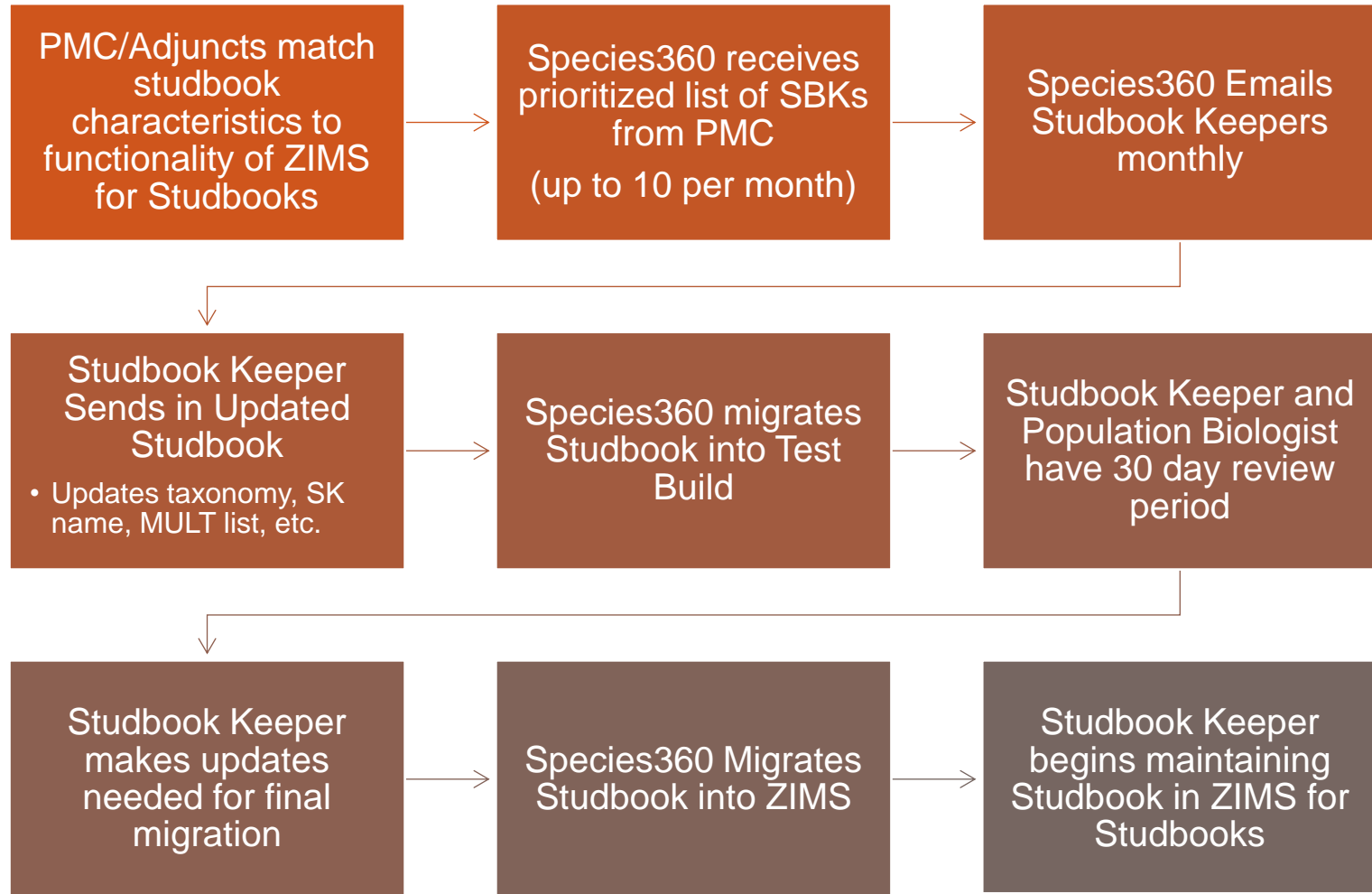


Looking for volunteers to migrate, but being cautious about which studbooks to select based on matching with the functionality of ZIMS for Studbooks in collaboration with population biologists.

Perhaps double-entry for about 1 year?

PMC is cautious.

Anyone can play with their studbook in the sandbox



ZIMS for Studbooks



Global information
serving conservation.

35 AZA Studbooks have fully migrated to Live ZIMS for Studbooks

<u>Program</u>	<u>Studbook Keeper</u>
Bird-of-Paradise, Raggiana	Jessica Theule
Bird-of-Paradise, Superb	Jessica Theule
Condor, California	Michael Mace
Dove, Mariana Fruit	Monica Blackwell
Dove, White-throated Ground	Gary Michael
Duiker, Blue	Sarah Ksiazek
Duiker, Yellow-backed	Linda Rohr Bachers
Falcon, African Pygmy	Nicole LaGreco
Fossa	Mandi Krebs
Gazelle, Slender-horned	Brigid Randle
Gecko, Turquoise Dwarf	Andy Snider
Goral, Chinese	Gil Myers
Hornbill, Great	Carol Hunsperger
Hornbill, Southern Ground	Ann Knutson
Iguana, Jamaican	Tandora Grant
Kiwi, North Island Brown	Kathy Brader
Lemur, Black	Peggy Hoppe
Lemur, Blue-eyed Black	Peggy Hoppe
Monkey, Southern Black	Keri Bauer
Onager, Persian	Kate Volz
Rhinoceros, Black	Gina M. Ferrie
Sheep, Desert Bighorn	Maureen McCarty
Starling, Emerald	Gwen Harris
Stork, Marabou	Paul Schutz
Stork, Storm's Woolly-necked	Sprina Liu
Tamarin, Bearded Emperor	Sara Sullivan
Tapir, Malayan	Michele Stancer
Tenrec, Lesser Madagascar Hedgehog	Shannon Irmscher
Tortoise, Ploughshare	Paul Gibbons
Turtle, Arakan Forest	Bill Hughes
Turtle, Four-eyed	Bill Hughes
Turtle, McCord's Box	Jeff Jundt
Turtle, Spiny	Bill Hughes
Vulture, Ruppell's Griffon	Bryan Emberton
Wolf, Red	Will Waddell

**15
studbooks
are in the
testing sandbox
area of
ZIMS for
Studbooks**

<u>Program</u>	<u>Studbook Keeper</u>
Blue Stanely Crane	James Dunster
Blue-crowned Motmot	Kevin Graham
Bobcat	Rebecca Stites
Coahuilan Box Turtle	Trent Barnhart
Elegant Crested Tinamou	Kristen Clark
Green Woodhoopoe	Kevin Graham
Madagascar Flat-tailed Tortoise	Michael Ogle
Polar Bear	Randi Meyerson
Prehensile-tailed Skink	Sam Curtis
Red-crested Cardinal	Jessica Conroy
Serval	Dan Dembiec
Sloth Bear	Travis G Vineyard
Walrus	Lisa Oland
White-crested Laughingthrush	Julia Ecklar
Wrinkled Hornbill	Susan Greer

PMC Testing Process

- Once a studbook is placed in the sandbox, a PMC/Adjunct is assigned
 - Contact Studbook Keeper to let you know that we are going to start testing/looking at your studbook in the sandbox
 - Comparison between PopLink/SPARKS and ZIMS for Studbooks
 - Reports
 - PMx export files
 - PMx project
 - Share a copy of our findings with the Studbook Keeper and Species360
 - Responses from Species360
 - Bugs – Species360 puts them on their list and we keep a list too
 - New data conventions – we are creating a list
 - We share these with the Studbook Keeper too
 - We all discuss when it makes sense to migrate the studbook to Live version of ZIMS for Studbooks
- *** this process varies slightly for Adjuncts

- *Documented and shared with PMC, Consultants, Adjuncts, Species360*
- *Continually evolving as more functionality is built in ZIMS for Studbooks*

PMC and Software

- Excited to help move the AZA community towards one modern software system
- Continue to be fluent in all studbook software until then
 - SPARKS
 - PopLink
 - ZIMS for Studbooks
 - SPARK-plug
 - Excel/Access

*PopLink is still an option.
ZIMS for Studbooks will be
great once completed.*



Thank you!

Any questions?