

ASSOCIATION OF ZOOS & AQUARIUMS



Anseriformes Taxon Advisory Group Regional Collection Plan 2nd Edition 2012

Compiled & Reviewed

Chair:	Keith Lovett, Palm Beach Zoo
Former Chair:	Doug Piekarz, Akron Zoo
Vice Chair:	Steve Sarro, National Aviary
Secretary:	Jackie Peeler, Henson Robinson Zoo
Editor:	Julia Ecklar, National Aviary

THANKS TO

*Steve Sarro, Julia Ecklar,
Fred Beall, and Stephanie Allard
for their relentless dedication to completing this document.*

ADDITIONAL THANKS TO

*Doug Piekarz,
for his years of service as TAG Chair,
and his historic work on the RCP.*

TABLE OF CONTENTS

ANSERIFORMES TAG DEFINITION	5
AZA ANSERIFORMES TAG STRUCTURE	6
AZA ANSERIFORMES TAG STEERING COMMITTEE.....	7
AZA ANSERIFORMES TAG ADVISORS	7
ANSERIFORMES TAG MISSION STATEMENT	8
AZA ANSERIFORMES TAG PRIMARY GOALS	8
TAG POSITION STATEMENTS	9
1) HPAI VACCINATION IN WATERFOWL	9
2) TRANSPONDERING OF WHITE-WINGED WOOD DUCKS	9
3) PINIONING OF WHITE-WINGED WOOD DUCKS	9
4) SOIL / WATER INTERFACE FOR WHITE-WINGED WOOD DUCKS	9
5) TRANSPONDERING OF PYGMY GEESE (<i>NETTAPUS</i> spp.).....	9
6) PINIONING OF PYGMY GEESE (<i>NETTAPUS</i> spp.).....	9
FLIGHT RESTRICTION STATEMENT	10
TAG WORKSHOPS.....	11
THREE YEAR ACTION PLAN.....	12
TAXONOMIC REFERENCES.....	13
SOURCES FOR ASSESSMENT OF WILD STATUS.....	13
RCP PLANNING PROCESS.....	14
PROGRAM REVIEW	14
PROGRAM MANAGEMENT CATEGORIES.....	15
<i>Species Survival Plan (SSP) Green</i>	15
<i>Species Survival Plan (SSP) Yellow</i>	15
<i>Studbook Red</i>	16
<i>Raft</i>	16
<i>Non-Program (NP)</i>	16
<i>Phase IN (PI)</i>	16
<i>Not Recommended (NR)</i>	16
SPACE CONSIDERATIONS	17
SPECIES SELECTION CRITERIA	18
<i>DIAGRAM 1: APPLICATION OF PROGRAM SELECTION CRITERIA</i>	22
<i>TABLE 1: MANAGED PROGRAM SPECIES</i>	23
<i>TABLE 2: RAFT SPECIES</i>	24
<i>TABLE 3: NON-PROGRAM (NP) SPECIES</i>	30
<i>TABLE 4: PHASE-IN (PI) SPECIES</i>	35
<i>TABLE 5: NOT RECOMMENDED SPECIES (NR)</i>	36
SPECIES PROFILES	38
RAFT PROGRAM DESCRIPTION	55
<i>TABLE 6: RAFT SPECIES TRENDS</i>	56
APPENDIX	57
USEFUL LISTSERVS	70

Photo Credits:

Figure 1: Mandarin Drake (Andy Kemerer)	5
Figure 2: Northern Pintail (USFWS)	5
Figure 3: Radjah Shelduck (Andy Kemerer)	6
Figure 4: Northern Pintails in Flight (USFWS / J. Kelly)	10
Figure 5: Pink-eared Duck (Andy Kemerer).....	11
Figure 6: Plumed (Eyton's) Whistling Duck (Andy Kemerer).....	13
Figure 7: Smew (Andy Kemerer)	14
Figure 8: Spectacled Eider (USFWS)	14
Figure 9: Snow Geese (Chris Young).....	17
Figure 10: Whistling Ducklings (Andy Kemerer).....	17
Figure 11: Paradise Shelducks (Andy Kemerer).....	18
Figure 12: Barrow's Goldeneye (Dick Daniels)	19
Figure 13: Yellow-billed Pintail (Andy Kemerer)	20
Figure 14: Pochard (Andy Kemerer)	21
Figure 15: Green Pygmy Goose (Andy Kemerer).....	35
Figure 16: Torrent Ducks (Tadeusz Stawarczyk).....	35
Figure 17: Southern Screamer (Claudio Timm).....	39
Figure 18: West Indian Whistling Duck (Dick Daniels)	40
Figure 19: Spotted Whistling Duck (Tom Tarrant).....	41
Figure 20: Coscoroba Swan (Dick Daniels).....	42
Figure 21: Trumpeter Swan (USFWS)	43
Figure 22: Hawaiiin Goose (USFWS)	44
Figure 23: White-winged Wood Duck (Dick Daniels).....	45
Figure 24: Swan Goose (Andy Kemerer)	47
Figure 25: African Pygmy Goose (Andy Kemerer)	48
Figure 26: Indian Pygmy Goose (Andy Kemerer)	49
Figure 27: Marbled Teal (Andy Kemerer).....	50
Figure 28: Madagascar Teal (Dick Daniels)	51
Figure 29: Red-breasted Goose (Andy Kemerer).....	53
Figure 30: Orinoco Goose (Roar Johansen).....	54
Figure 31: Northern Shovelers (USFWS).....	70

Photographers

Andy Kemerer, National Aviary Andy.Kemerer@aviary.org

Chris Young, “Chris’ Camera Bag” at [Prairie State Outdoors](#)

Dick Daniels, [Birds of the World](#)

Tadeusz Stawarczyk, University of Wroclaw stawar@biol.uni.wroc.pl

Tom Tarrant, [Natural Samsonvale](#)

[Claudio Timm](#), Universidade Federal de Pelotas timmm@ufpel.tche.br

Roar Johansen roarjo@gmail.com

Anseriformes TAG Definition



Figure 1: Mandarin Drake (Andy Kemerer)

The AZA's Anseriformes Taxon Advisory Group (TAG) oversees all ducks, geese, swans, and screamers in AZA facilities. A complete listing of all species covered by the Regional Collection Plan (RCP) can be found in [Tables 1 thru 5](#) of this document.

Domestic waterfowl are well-represented in AZA facilities. For the most part, these domestic breeds do not compete with wild species for space, so they will not be considered as separate breeds for the purposes of these analyses.

Recognition of domestic breeds is made in generic terms (Domestic Goose, Domestic Mallard, and Domestic Muscovy). Only the Swan Goose SSP Yellow program specifically addresses the impact of Domestic Chinese Geese.



Figure 2: Northern Pintail (USFWS)

AZA Anseriformes TAG Structure

The AZA Anseriformes TAG consists of a 9-member Steering Committee. Advisors to the TAG include all Program Leaders, as well as specialists in veterinary care, education, and privately-held collections.

The Steering Committee is responsible for the TAG's overall operation, assisting in the development of Regional Collection Plans, overseeing program management, and providing leadership to both standing and *ad hoc* committees. Members are required to have access to electronic communication, as the Committee communicates throughout the year via email. Steering Committee members are encouraged to attend at least one TAG meeting per year and are required to vote in all TAG policy or position approval processes. A quorum of the Steering Committee is required for establishment of program recommendations.



Figure 3: Radjah Shelduck (Andy Kemerer)

Any facility participating in an Anseriformes TAG program may designate an Institutional Representative (IR) to the Anseriformes TAG. The primary responsibility of the IR is to communicate with the Steering Committee and disseminate information from the Anseriformes TAG to their respective institutions. Communication with IRs is typically through electronic listserv, as well as at annual or mid-year meetings. Video conferencing has also been used.

The Steering Committee members are selected from the pool of IRs and serve three-year terms. The Steering Committee Chair is appointed by the Wildlife Conservation and Management Committee (WCMC). There are no term limits. Solicitation for Steering Committee members is made at the annual TAG meeting and through the TAG listserv. To date, there have not been sufficient Steering Committee candidates to require holding an election.

Officers are elected by the Steering Committee from within the Steering Committee members and officers serve unlimited terms for as long as they sit on the Steering Committee. Should a serious leadership conflict occur among members of the Steering Committee, the WCMC has a conflict resolution process. A vote of confidence may also be taken or new elections may be held.

AZA Anseriformes TAG Steering Committee

<u>Chair:</u> Keith Lovett Palm Beach Zoo 1301 Summit Blvd. West Palm Beach, FL 33405 Ph: 561-533-0887 x213 klovett@palmbeachzoo.org	<u>Former Chair:</u> Doug Piekarz Akron Zoo 500 Edgewood Ave. Akron, OH 44307 Ph: 330-374-8966 x8966 DMPiekarz@akronzoo.org	<u>Vice Chair:</u> Steve Sarro National Aviary 700 Arch Street Pittsburgh, PA 15212 Ph: 412-258-9448 Steve.Sarro@aviary.org	<u>Secretary:</u> Jackie Peeler Henson Robinson Zoo 1100 East Lake Dr. Springfield, IL 62712 Ph: 217-753-6217 x23 jpeeler@hensonrobinsonzoo.org	Sherry Branch Sea World Orlando 7007 SeaWorld Dr. Orlando, FL 32821-8097 Ph: 407-363-2361 Fax: 407-363-2378 Sherry.Branch@SeaWorld.Com
Ann Konopik Salisbury Zoo PO Box 2979 Salisbury, MD 21802-2979 Ph: 410-548-3117 x7 Fax: 410-860-0919 akonopik@ci.salisbury.md.us	Michael Macek St. Louis Zoo One Government Dr. St. Louis, MO 63110-1395 Ph: 314-646-4825 Fax: 314-647-7696 Macek@stlzoo.org			

AZA Anseriformes TAG Advisors

Veterinary Advisor: VACANT	Education Advisor: VACANT	Private Sector Advisor: Mike Lubbock Sylvan Heights Waterfowl 4963 Highway 258 Scott Neck, NC 27874 Ph: 252-826-5038 Fax: 252-826-3273 sylvanhts@coastalnet.com	<u>Editor:</u> Julia Ecklar National Aviary 700 Arch Street Pittsburgh, PA 15212 Ph: 412-258-9461 Julia.Ecklar@aviary.org
--	---	---	---

Anseriformes TAG Mission Statement

The AZA Anseriformes Taxon Advisory Group (TAG) is committed to the conservation of ducks, geese, swans, and screamers in North America. In pursuit of this goal, the TAG will coordinate international efforts in captive management and propagation, education, and research. In addition, the TAG will interface with international specialist groups and TAGs as part of waterfowl and wetland conservation efforts worldwide.

AZA Anseriformes TAG Primary Goals

- 1) Promote the importance and value of exhibiting waterfowl in AZA institutions worldwide.
- 2) Establish and coordinate captive management programs for waterfowl, including continued development of the Raft Program.
- 3) Identify and establish husbandry standards for waterfowl, including specific husbandry research where appropriate.
- 4) Identify and support field projects contributing to the conservation of wild waterfowl populations and wetland habitats.
- 5) Foster increased cooperation between zoos, aquaria, and privately-held waterfowl collections worldwide.
- 6) Establish the Anseriformes TAG website as a resource for waterfowl husbandry and management information.

TAG Position Statements

1) HPAI Vaccination in Waterfowl

There are currently no recommended vaccines or vaccine protocols for HPAI for birds in any taxonomic order housed in AZA facilities. As guidelines are developed and released by AZA, the vaccination and recommendations of the Anseriformes TAG will be updated and distributed.

2) Transpondering of White-winged Wood Ducks

All White-winged wood ducks hatched at AZA facilities must be transpondered by the time they are 30 days old. Transponders must be able to be read by a universal reader. Intrascapular placement is recommended for consistency.

3) Pinioning of White-winged Wood Ducks

The SSP strongly discourages pinioning of White-winged wood ducks. Being large-bodied perching birds, the ability to stay up off waterways and soil is important to the species' welfare. Please contact the White-winged wood duck SSP Coordinator prior to implementing any permanent flight restrictions on White-winged wood ducks. For birds that are already pinioned: notify the SSP Coordinator to facilitate future management, and to match pinioned / unpinioned birds to exhibits in which they can best be held.

4) Soil / Water Interface for White-winged Wood Ducks

The SSP strongly recommends removal of the soil / water interface in White-winged wood duck exhibits, to prevent dabbling in locations where there may be concentrations of mycobacteria. A smooth concrete, rockwork, or other hard, impervious surface is recommended at the waterline. Pool bottoms can remain earthen.

5) Transpondering of Pygmy Geese (*Nettapus* spp.)

All pygmy geese should be transpondered before transfer to another institution, to facilitate better tracking of birds during moves. Transponders must be able to be read by a universal reader. Intrascapular placement is recommended for consistency.

6) Pinioning of Pygmy Geese (*Nettapus* spp.)

The Anseriformes TAG strongly discourages pinioning of Pygmy Geese. Being cavity-nesting perching birds, the ability to roost in trees at night is considered important to this species' welfare.

Flight Restriction Statement

- 1) The Anseriformes Taxon Advisory Group recognizes the welfare debate surrounding the use of flight restriction in birds is complex and generates many strong and varied opinions.
- 2) The Anseriformes Taxon Advisory Group encourages every AZA institution to devote significant time and energy to thinking through and documenting its own institutional guidelines on if, when, and how flight restriction will be employed. We encourage all institutions to create large, multi-faceted exhibits where birds can live, breed and remain flighted.
- 3) The Anseriformes Taxon Advisory Group suggests evolving toward the deletion of pinioning as a long-term, permanent practice of flight restriction. We encourage all institutions to incorporate the importance of flight for birds into their masterplans and designs for new exhibits, and to work toward covered exhibits for all flighted birds.
- 4) The pinioning of waterfowl should only occur when all other avenues for alternative methods of containment have been thoroughly investigated. The procedure should be conducted by an animal care/husbandry expert, or a veterinarian experienced in pinioning procedures. Birds should only undergo pinioning while still under five (5) days of age.



Figure 4: Northern Pintails in Flight (USFWS / J. Kelly)

TAG Workshops

In an effort to create more interest and enthusiasm in waterfowl management, the Anseriformes TAG presented a series of highly successful Waterfowl Workshops at the 2010 AZA conference in Virginia. The conference presentations generated by attendees, as well as timely demographic information and species profiles, is available through the ASAG Website.



Figure 5: Pink-eared Duck (Andy Kemerer)

Three Year Action Plan

2012

- ❖ Promote non-program species via flock management at select facilities
- ❖ Identify veterinary advisor(s)
- ❖ Identify private waterfowl partners
- ❖ Increase size of Steering Committee to 12 members
- ❖ Recruit program leaders for currently vacant and new programs, including Madagascar Teal (Studbook Red), Orinoco Goose (Studbook Red), and Red-breasted Goose (Studbook Red)
- ❖ Promote waterfowl in all zoo and aquarium collections through workshops and listserv

2013

- ❖ Complete the Animal Care Manual for waterfowl
- ❖ Identify and distribute assignments for Steering Committee members, including population division, liaison with private waterfowl partners, and P.R. for ducks
- ❖ Continue to promote waterfowl in all zoo and aquarium collections through workshops and listserv
- ❖ Create newsletter for waterfowl to be run by Steering Committee

2014

- ❖ Promote waterfowl in all zoo and aquarium collections through workshops and listserv

Taxonomic References

A World Checklist of Birds (Sibley & Monroe, 1992) remains the accepted taxonomic standard for waterfowl. This standard is followed by the IUCN / SSC Threatened Waterfowl Specialist Group Action Plan for the Conservation of Waterfowl and all taxonomic references in this document are consistent with these sources.



Sources for Assessment of Wild Status

The following sources were consulted for data relating to species status in the wild:

IUCN Red List (www.iucnredlist.com)

USFWS (www.fws.gov)

CITES (www.cites.org)



Figure 6: Plumed (Eyton's) Whistling Duck (Andy Kemerer)

RCP Planning Process

Program Review

A species review workshop was held by the TAG Steering Committee on 08 December 2008. Ten of the 12 Steering Committee members were present at either Akron Zoo or Disney's Animal Kingdom and communicated via video conferencing. All TAG advisors were either present or had submitted advanced reports. Every taxa covered by this TAG was evaluated. All participants voted for each species to be managed as part of an SSP, PMP, DERP, Phase-in, Phase-out, or Not Recommended program. Since that meeting, there have been changes in program definitions which can be found in this section of the Regional Collection Plan document.



Figure 7: Smew (Andy Kemerer)

As a result of these changes, it was decided to re-evaluate each species with at least two viable pairs held in North American collections, using AZA-recommended criteria. Recommended species were then assigned to one of seven categories, three of which (SSP Green, SSP Yellow, and Studbook Red) were based on the sustainability criteria set forth by AZA.

Full descriptions of all criteria can also be found at:

[www.aza.org/uploadedFiles/Animal_Care_and_Management/TAGs, SSPs, PMPs, Studbooks, SAGs/AZARCPHandbook_2011.pdf](http://www.aza.org/uploadedFiles/Animal_Care_and_Management/TAGs,_SSPs,_PMPs,_Studbooks,_SAGs/AZARCPHandbook_2011.pdf)



Figure 8: Spectacled Eider (USFWS)

Program Management Categories

Taxa were assigned to one of the following seven categories:

- Species Survival Plan (SSP) Green
- Species Survival Plan (SSP) Yellow
- Studbook Red
- Raft
- Non-Program (NP)
- Phase IN (PI)
- Not Recommended (NR)

Species Survival Plan (SSP) Green

Species must have at least 50 individuals, and must be able to maintain 90% genetic diversity over 100 years. Species intensively managed by elected management committee. Goal is to maintain a genetically viable and demographically stable population for long-term conservation purposes.

- Studbook required
- Managed by an SSP Green Coordinator
- Breeding / Transfer recommendations communicated through a Master Plan
- Intensive management to maintain captive population
- Conservation of species a consideration
- Institutional compliance required
- Non-member participants must be approved
- Institutional input through Institutional Representatives (IRs)

Species Survival Plan (SSP) Yellow

Species must have at least 50 individuals, but does not meet the 90% genetic diversity over 100 years criterion. Not as intensively managed as SSP Green populations. However, as populations in this category require some growth, genetic demographic management is necessary. Species in this category may be upgraded to SSP Green as circumstances / needs dictate.

- Studbook required
- Managed by SSP Yellow Coordinator
- Breeding / Transfer recommendations communicated through Masterplan
- Moderate management to maintain captive population
- Institutional compliance encouraged but not required
- Non-member participation through AZA and institutional Acquisition / Disposition policies
- Institutional input through TAG Institutional Representatives (IRs)

Studbook Red

Species held with existing studbooks. Species champion appointed to monitor annual population numbers, and to alert the TAG should significant changes occur. The species may be upgraded to SSP Yellow as circumstances / needs dictate.

Raft

Species held for display, education, and / or husbandry / research purposes only. Species champion appointed to monitor annual population numbers, and to alert the TAG should significant changes occur. If population management becomes necessary, species may be upgraded to Studbook Red or an SSP.

- No studbook required
- Species champion (chosen by TAG) may track population through registries
- Breeding / Transfers not managed under auspices of AZA or its programs, and population management advice / support from SPMAG / PMC not guaranteed
- No long-term genetic / demographic management required

Non-Program (NP)

Species is not currently in competition with an existing management program, and has no need to be managed. TAG may recommend this species be upgraded to a Raft program if better monitoring becomes required.

Phase IN (PI)

Species does not currently exist in AZA collections or only exists in very small numbers. Recommended by TAG to be phased in due to institutional demand (as identified in the space survey).

- No studbook required
- Not currently in AZA institutions
- Once captive population has been initiated, species will be reassigned to another management category as appropriate
- Population management advice / support from SPMAG / PMC not guaranteed

Not Recommended (NR)

Species is not currently in AZA collections, and no institutional demand identified in the space survey.

Space Considerations

Waterfowl are often managed in large flocks. These multi-individual and multi-species flocks may not present an easy opportunity for individual specimen management (pairing Bird #1 with Bird #2) and are therefore generally better managed as Rafts unless some alternative management strategy is developed (such as colony management). This issue of colony management may be explored in more depth in subsequent editions of the RCP.



Figure 9: Snow Geese (Chris Young)

SPACE ANALYSIS

A space survey was distributed to 212 institutions in the winter of 2010. The goal of this survey was to determine interest and space availability for each species represented in this TAG. Response rate was 87%, with 184 of the 212 surveyed institutions providing results.

Survey data were used to evaluate space requirements for each program, and to anticipate changing needs over the next three years. An analysis of trends from previous years influenced the choice of a three-year projection, as it was felt this timeframe would allow for better response to rapid changes in a population. (The full space survey can be found in [Appendix: 2010 Space Survey](#).)

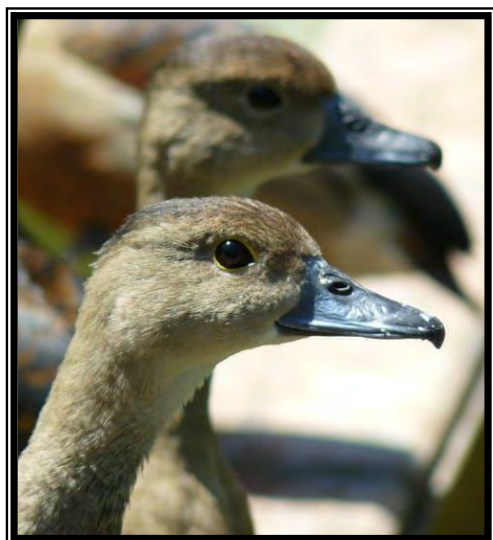


Figure 10: Whistling Ducklings (Andy Kemerer)

The Population Management Center was consulted in 2010 to establish basic target population sizes for each SSP and Studbook program. However, it is understood that these target numbers will require re-evaluation as individual species needs are identified.

Species Selection Criteria

The Anseriformes TAG followed AZA-recommended criteria in determining appropriate species. Each species currently found in AZA institutions with two or more viable pairs was put through a subject evaluation to determine the program type. The criteria and definitions are found below. All criteria were assigned equal weight, and each has an assigned value of “1,” “2,” or “3.” Species with scores of 27 or less were recommended as managed program species. Species with scores of 28 or more were assigned to one of the other four categories, and will be monitored accordingly.

Conservation Status

- Status of the species in the wild
- Extinction risk of species in the wild
- 1=Endangered, 2=Threatened or Vulnerable, 3=Least Concern or Not Listed

Husbandry Expertise

- Level of expertise available to the management program to meet the species basic biological needs (i.e., nutritional, medical, social) as related to maintaining and propagating the species in AZA-member institutions.
- 1=High Level of expertise, 2=Moderate Level, 3=Low Level

Reproductive Factors

- Relative ease of breeding or contracepting the species
- 1=High Level of difficulty, 2=Moderate Level, 3=Low Level



Figure 11: Paradise Shelducks (Andy Kemerer)

Availability

- Within AZA-member institutions
- Outside AZA-member institutions
- Potential non-AZA partnerships
- On-going programs for intensively building sustainability of the species
- 1=Rare or Difficult to obtain, 2=Moderately Available, 3=Readily Available

Demand within AZA

- Demand for the species within AZA-member institutions
- Space availability
- 1=High Demand, 2= Moderate Demand, 3=Little or No Demand

Institutional Commitment

- Commitment to species within AZA-member institutions
- Space and resource availability
- 1=High Level of commitment, 2=Moderate Level, 3=Low Level

Availability / Feasibility of Potential Founders

- Availability of potential founders in conjunction with the viability of the North American population
- Financial, legal, ethical, and logistical issues
- Interest among AZA-member institutions to import founders from other regions or the wild
- 1=Rare or Difficult to obtain, 2=Moderately Available, 3=Easy to Obtain

Scientific or Research Potential

- Specific research objectives and potential needs within AZA-member institutions, universities, and other scientific collaborators
- Potential to increase scientific knowledge of the species that has direct applications to conservation of the species in the wild
- 1=High Level potential, 2=Moderate Level, 3=Little or No potential

Exhibit Value

- Visitor appeal for the species
- 1=High Appeal, 2=Moderate Appeal, 3=Little or No Appeal



Figure 12: Barrow's Goldeneye (Dick Daniels)

Education Value

- Potential to increase visitor awareness of the species, its habitat, and conservation issues surrounding the species
- Program animal use / potential
- 1=High Level of potential, 2=Moderate Level, 3=Little or No potential

Risk of Losing the *Ex Situ* Population

- Risk of loss within AZA-member collections if the population is not managed (i.e., increase or decrease)
- Risk of loss within AZA-member collections if the population is managed (i.e., increase or decrease)
- 1=High Level of risk, 2=Moderate Level, 3=Little or No risk



Figure 13: Yellow-billed Pintail (Andy Kemerer)

Link to *In Situ* Conservation

- Potential for a managed population to affect *in situ* conservation (i.e., bona fide assurance population, re-introduction program)
- Potential to engage visitors in conservation action for the species and its habitat
- Existence of a link between a management program and conservation of these taxa in the wild, including field research, conservation capacity building, population and habitat survey work, and in-range education programs
- 1=High Level of potential, 2=Moderate Level, 3=Little or No potential

Acquisition / Maintenance Costs

- Cost of obtaining the species from outside of AZA-member institutions
- Cost of maintenance of the species or associated programs
- 1=High Cost, 2=Moderate Cost, 3=Little or No Cost

International Program or North American Government Conservation Program

- Existence of an international conservation / management program for these taxa, such as International Studbooks, Global Species Management Programs (GSMPs) and established conservation programs (i.e., Save the Tiger Fund)
- Existence of a North American governmental or other NGO conservation program associated with this species
- 1=Organized Program Exists, 2=Potential for Program Organization, 3=No Program

AZA Program Status

- Species has a previously-managed program in existence
- Species has the potential to become a managed program
- 1=AZA SSP or Studbook Exists, 2=Potential for Managed Program, 3=No Potential for Program



Figure 14: Pochard (Andy Kemerer)

DIAGRAM 1: APPLICATION OF PROGRAM SELECTION CRITERIA

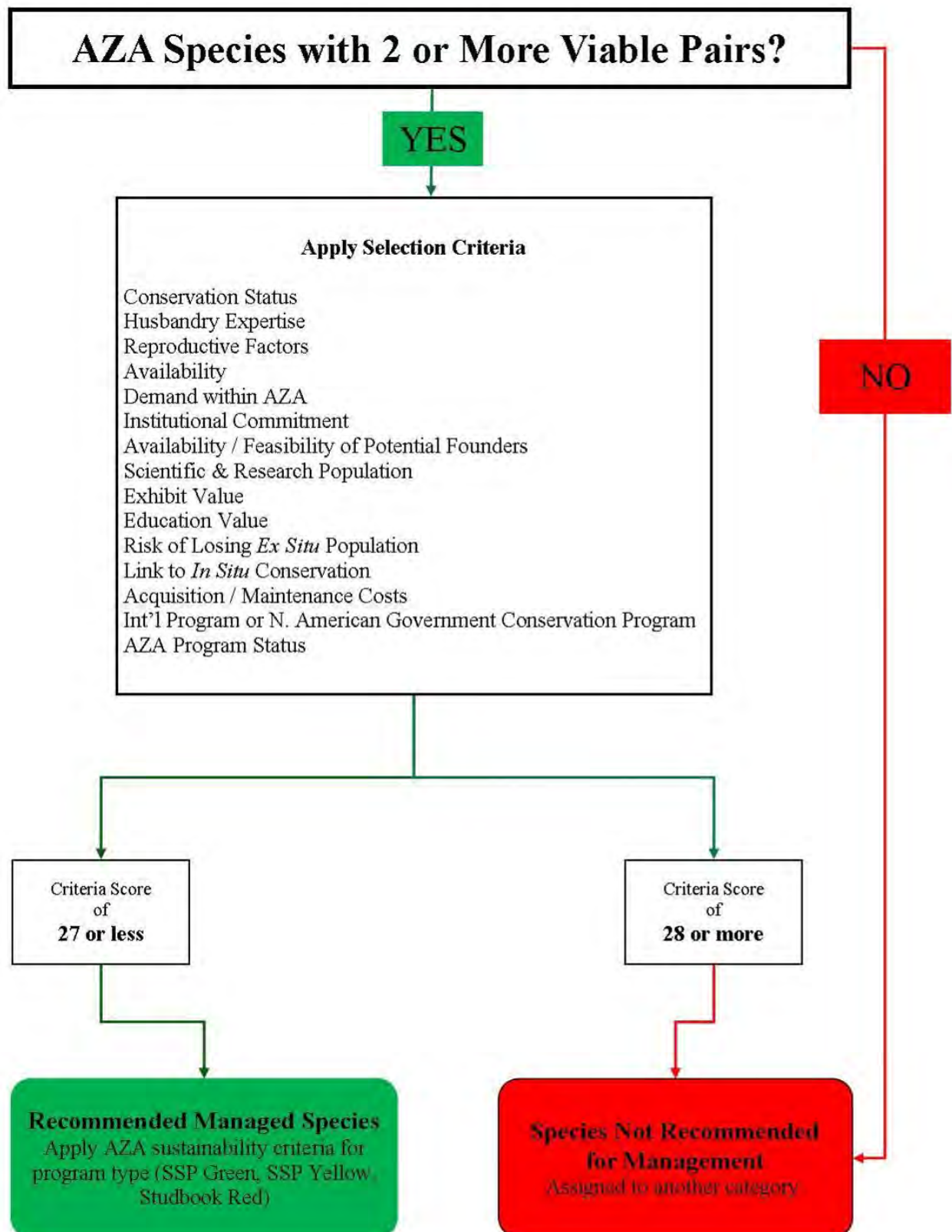


TABLE 1: MANAGED PROGRAM SPECIES

Species Name	Conservation Status	Selection Score	Sustainability Score % GD over 100 yrs	Current Pop.* based on PMC and ISIS data	Current Institutions	Target Pop.	Previous Program	Recommended Program
Crested Screamer <i>Chauna torquata</i>	Least Concern	24	83%	52.44.11	48	150	PMP	SSP Yellow
West Indian Whistling Duck <i>Dendrocygna arborea</i>	Vulnerable/ CITES II	21	UNK	23.20.34	11	100	PMP	Studbook Red
Spotted Whistling Duck <i>Dendrocygna guttata</i>	Least Concern	25	UNK	3.5.7	2	25	Studbook	Studbook Red
Coscoroba Swan <i>Coscoroba coscoroba</i>	Least Concern	24	UNK	20.27.1	20	75	PMP	Studbook Red
Trumpeter Swan <i>Cygnus buccinator</i>	Least Concern	25	UNK	34.31.10	36	150	PMP	Studbook Red
Hawaiian (Nene) Goose <i>Branta sandvicensis</i>	Vulnerable/ CITES I/ USFWS Endangered	21	60%	48.47.3	20	150	PMP	SSP Yellow
White-winged Wood Duck <i>Cairina scutulata</i>	Endangered/ USFWS Endangered	23	15%	49.56.8	13	150	SSP	SSP Yellow
Swan Goose <i>Anser cygnoides</i>	Vulnerable	27	38%	37.31.0	9	100	PMP	SSP Yellow
African Pygmy Goose <i>Nettapus auritus</i>	Least Concern	25	48%	29.33.10	17	150	PMP	SSP Yellow
Indian Pygmy Goose <i>Nettapus coromandelianus</i>	Least Concern	24	27%	23.23.6	13	75	PMP	SSP Yellow
Marbled Teal <i>Marmaronetta angustirostris</i>	Vulnerable	27	UNK	85.70.10	26	250	PMP	SSP Yellow
Madagascar Teal <i>Anas bernieri</i>	Endangered/ CITES II	24	UNK	30.33.1	12	100	Phase In	Studbook Red
Red-breasted Goose <i>Branta ruficollis</i>	Endangered	23	UNK	27.27.1	15	100	DERP	Studbook Red
Orinoco Goose <i>Neochen jubata</i>	Near Threatened	25	UNK	17.27.18	8	100	DERP	Studbook Red

TABLE 2: RAFT SPECIES

Species Name	Conservation Status	Selection Score	Current Pop.* <small>based on space survey results</small>	Current Institutions	Spaces Available	Previous Program	Notes
Raft #1: Yvonne Stainback (Caldwell Zoo) YStainback@caldwellzoo.org							
White-faced Whistling Duck <i>Dendrocygna viduata</i>	Least Concern	31	194.217.48	46	600	DERP	
Black-bellied Whistling Duck <i>Dendrocygna autumnalis</i>	Least Concern/ CITES III	33	26.55.34	21	200	DERP	
Plumed (Eyton's) Whistling Duck <i>Dendrocygna eytoni</i>	Least Concern	33	13.13.0	10	50	DERP	
Fulvous Whistling Duck <i>Dendrocygna bicolor</i>	Least Concern	33	59.42.69	17	275	DERP	
Lesser Indian Whistling Duck <i>Dendrocygna javanica</i>	Least Concern	34	9.7.0	6	20	DERP	
Black Swan <i>Cygnus atratus</i>	Least Concern	33	45.74.7	51	125	DERP	
Black-necked Swan <i>Cygnus melanocoryphus</i>	Least Concern	33	28.39.5	33	120	DERP	
Cape Barren Goose <i>Cereopsis novaehollandiae</i>	Least Concern	33	6.9.0	9	25	DERP	
Freckled Duck <i>Stictonetta naevosa</i>	Least Concern	N / A	0	0	5	DERP	
Gambia Spur-winged Goose <i>Plectropterus g. gambensis</i>	Least Concern	31	9.5.0	8	20	Phase In	
Black Spur-winged Goose <i>Plectropterus g. niger</i>	Least Concern	31	14.8	6	20		

Species Name	Conservation Status	Selection Score	Current Pop.* <small>based on space survey results</small>	Current Institutions	Spaces Available	Previous Program	Notes
--------------	---------------------	-----------------	---	----------------------	------------------	------------------	-------

Raft #2: Sarah Schoenberg (Roosevelt Park Zoo) sarahrpz@srt.com

Magpie Goose <i>Anseranas semiplamata</i>	Least Concern	35	22.26.2	14	50	DERP	
Domestic Goose <i>Anser a. domesticus</i>	Not Listed	To Be Determined					
Bar-headed Goose <i>Anser indicus</i>	Least Concern	33	68.65.7	26	175	DERP	
Snow Goose <i>Chen caerulescens</i>	Least Concern	37	5.1.57	10	80	Phase Out	
Emperor Goose <i>Chen canagica</i>	Near Threatened	30	3.4.0	3	25	DERP	
Barnacle Goose <i>Branta leucopsis</i>	Least Concern	32	5.10.0	7	25	DERP	
Ross's Goose <i>Chen rossii</i>	Least Concern	35	1.2.2	3	20	Phase In	
Andean Goose <i>Chloephaga melanoptera</i>	Least Concern	32	7.3.0	3	15	Phase In	

Raft #3: Keith Lovett (Palm Beach Zoo) KLovett@palmbeachzoo.org

Ringed Teal <i>Callonetta leucophrys</i>	Least Concern	36	157.137.15	50	300	DERP	
Cape Teal <i>Anas capensis</i>	Least Concern	36	25.6.3	13	60	DERP	
Chiloe Wigeon <i>Anas sibilatrix</i>	Least Concern	37	48.42.11	29	165	DERP	
American Wigeon <i>Anas americana</i>	Least Concern	39	19.18.4	13	100	DERP	

Species Name	Conservation Status	Selection Score	Current Pop.* based on space survey results	Current Institutions	Spaces Available	Previous Program	Notes
American Black Duck <i>Anas rubripes</i>	Least Concern	38	9.9.9	8	35	DERP	
Yellow-billed Duck <i>Anas undulata</i>	Least Concern	36	23.16.1	6	50	DERP	
Cinnamon Teal <i>Anas cyanoptera</i>	Least Concern	37	55.41.8*	24*	240*	DERP	*numbers include Northern sub-spp
Bronze-winged (Spectacled) Duck <i>Anas specularis</i>	Near Threatened	33	5.5.0	4	20	Phase In	
Falcated Duck <i>Anas falcata</i>	Near Threatened	32	9.5.0	5	45	DERP	
Laysan Teal <i>Anas laysanensis</i>	Critically Endangered/ CITES I/ USFWS Endangered	28	16.22.3	9	60	DERP	
Blue-winged Teal <i>Anas discors</i>	Least Concern	39	30.35.2	23	140	DERP	

Raft #4: Tammy Williams (Busch Gardens Tampa) Tammy.Williams@BuschGardens.com							
Red Shoveler <i>Anas platalea</i>	Least Concern	33	11.7.1	9	50	DERP	
Northern Shoveler <i>Anas clypeata</i>	Least Concern/ CITES III	34	40.32.7	26	175	DERP	
Australian Shoveler <i>Anas rhynchos</i>	Least Concern	33	5.5.0	4	25	Phase Out	
Northern Pintail <i>Anas acuta</i>	Least Concern	36	109.102.5	41	250	DERP	
White-cheeked Pintail <i>Anas bahamensis</i>	Least Concern	36	40.29.1	29	80*	DERP	*numbers include Bahama sub-sp
Red-billed Teal <i>Anas erythrorhynchos</i>	Least Concern	35	19.14.0	6	40	DERP	

Species Name	Conservation Status	Selection Score	Current Pop.* <small>based on space survey results</small>	Current Institutions	Spaces Available	Previous Program	Notes
Indian Spot-billed Duck <i>Anas poecilorhyncha</i>	Least Concern	34	11.9.0	4	20	Phase In	
South Georgian Pintail <i>Anas g. georgica</i>	Least Concern	N / A	2.0.0	2	5	Phase In	
Chestnut Teal <i>Anas castanea</i>	Least Concern	34	7.10.1	8	40	DERP	
Sharp-winged Teal <i>Anas flavirostris oxyptera</i>	Least Concern	37	2.2.2	1	30	DERP	
Green-winged Teal <i>Anas crecca carolinensis</i>	Least Concern	38	20.18.5	16	100	Phase Out	
Puna Teal <i>Anas puna</i>	Least Concern	37	8.6.0	7	45	DERP	
Hottentot Teal <i>Anas hottentota</i>	Least Concern	33	28.23.9	17	100	DERP	
Baikal Teal <i>Anas formosa</i>	Least Concern/ CITES II	28	9.8.0	7	70	Phase In	
Silver Teal <i>Anas versicolor</i>	Least Concern	N / A	1.4.0	2	15	Phase In	

Raft #5: Brittney Weaver (Denver Zoo) BWeaver@denverzoo.org

Hartlaub's Duck <i>Pteronetta hartlaubii</i>	Least Concern	N / A	1.4.0	2	10	Phase Out	
Eastern Hartlaub's Duck <i>Pteronetta h. albifrons</i>	Least Concern	N / A	0.2.0	2	10	Phase Out	
Western Hartlaub's Duck <i>Pteronetta h. hartlaubii</i>	Least Concern	N / A	2.0.0	0	10	Phase In	
Maned (Australian Wood) Duck <i>Chenonetta jubata</i>	Least Concern	N / A	3.1.0	4	20	DERP	
Abyssinian Blue-winged Goose <i>Cyanochen cyanopterus</i>	Vulnerable	33	7.11.0	9	25		

Species Name	Conservation Status	Selection Score	Current Pop.* <small>based on space survey results</small>	Current Institutions	Spaces Available	Previous Program	Notes
Egyptian Goose <i>Alopochen aegyptiaca</i>	Least Concern	38	43.55.44	28	140		
Common Shelduck <i>Tadorna tadorna</i>	Least Concern	35	27.44.0	11	60		
Moluccan Radjah Shelduck <i>Tadorna r. radjah</i>	Least Concern	34	32.20.1	16	70		
South African Shelduck <i>Tadorna cana</i>	Least Concern	33	16.4.0	10	40		
Ruddy Shelduck <i>Tadorna ferruginea</i>	Least Concern	35	19.28.6	12	70		
Paradise Shelduck <i>Tadorna variegata</i>	Least Concern	32	4.4	5	15	Phase In	
Australian Shelduck <i>Tadorna tadornoides</i>	Least Concern	31	11.8.0	7	30	Phase Out	
Brazilian Teal <i>Amazonetta brasiliensis</i>	Least Concern	33	5.1.0	6	40	DERP	
Mandarin Duck <i>Aix galericulata</i>	Least Concern	35	164.133.2	50	425	DERP	
Wood Duck <i>Aix sponsa</i>	Least Concern	34	206.141.15	60	380	DERP	

Raft #6: Fred Beall (Zoo New England) FBeall@zoonewengland.com							
Bufflehead <i>Bucephala albeola</i>	Least Concern	34	19.25.0	17	125	DERP	
Common Goldeneye <i>Bucephala clangula</i>	Least Concern	35	12.15.0	8	40*	DERP	*Common & American combined
Barrow's Goldeneye <i>Bucephala islandica</i>	Least Concern	35	18.17.8	11	60	DERP	
Smew <i>Mergellus albellus</i>	Least Concern	30	22.27.1	18	80	DERP	

Species Name	Conservation Status	Selection Score	Current Pop.* based on space survey results	Current Institutions	Spaces Available	Previous Program	Notes
American Merganser <i>Mergus merganser americanus</i>	Least Concern	N / A	1.3.0	3	25	DERP	
Hooded Merganser <i>Mergus cucullatus</i>	Least Concern	36	147.167.15	58	450	DERP	
Ruddy Duck <i>Oxyura jamaicensis</i>	Least Concern	34	177.159.40*	48	450*		*numbers include NARD
Red-crested Pochard <i>Netta rufina</i>	Least Concern	36	50.40.1	20	160		
Rosy-billed Pochard <i>Netta peposaca</i>	Least Concern	35	78.59.6	23	150		
Canvasback <i>Aythya valisineria</i>	Least Concern	36	38.37.4	21	140		
White-eye Pochard (Hardhead) <i>Aythya australis</i>	Least Concern	N / A	1.3.0	2	10	Phase In	
Lesser Scaup <i>Aythya affinis</i>	Least Concern	36	12.9.0	10	45	DERP	
Tufted Duck <i>Aythya fuligula</i>	Least Concern	35	8.7.0	6	45	Phase Out	
King Eider <i>Somateria spectabilis</i>	Least Concern	29	5.4.0	3	10	Phase In	
Spectacled Eider <i>Somateria fischeri</i>	Least Concern/ USFWS Threatened	29	12.10.1	4	50	DERP	

TABLE 3: NON-PROGRAM (NP) SPECIES

Species Name	Conservation Status	Selection Score	Current Pop.* <small>based on space survey results</small>	Current Institutions	Spaces Available	Previous Program
Northern Screamer <i>Chauna chavaria</i>	Near Threatened	N / A	2.1.0	1	10	Not Recommended
East Indian Whistling Duck <i>Dendrocygna a. arcuata</i>	Least Concern	31	5.5.0	3	15	Phase Out
African White-backed Duck <i>Thalassornis l. leuconotus</i>	Least Concern	32	2.4.0	4	20	Phase In
Whistling Swan <i>Cygnus columbianus</i>	Least Concern	31	7.11.1	8	20	Phase Out
Whooper Swan <i>Cygnus cygnus</i>	Least Concern	31	2.3.0	3	10	Phase In
Mute Swan <i>Cygnus olor</i>	Least Concern	35	22.21.13	16	40	Phase Out
Canada Goose <i>Branta canadensis</i>	Least Concern	38	10.14.27	13	50	Phase Out
Aleutian Canada Goose <i>Branta c. leucopareia</i>	Least Concern/ CITES I	32	2.6.0	2	10	Phase In
Giant Canada Goose <i>Branta c. maxima</i>	Least Concern	33	4.9.0	3	15	Phase Out
Cackling Canada Goose <i>Branta c. minima</i>	Least Concern	35	1.1.5	3	15	Phase Out
Dusky Canada Goose <i>Branta c. occidentalis</i>	Least Concern	N / A	0.1.0	1	0	Phase Out
Lesser Canada Goose <i>Branta c. parvipes</i>	Least Concern	N / A	1.1.0	2	5	Not Recommended
Brant Goose <i>Branta bernicla</i>	Least Concern	N / A	1.0.0	1	5	Not Recommended

Species Name	Conservation Status	Selection Score	Current Pop.* based on space survey results	Current Institutions	Spaces Available	Previous Program
Pacific Brant Goose <i>Branta b. orientalis</i>	Least Concern	33	4.2.0	2	10	Phase Out
Greylag Goose <i>Anser anser</i>	Least Concern	40	2.6.3	5	5	
Greater White-fronted Goose <i>Anser albifrons</i>	Least Concern	34	0.1.5	2	10	Phase Out
Lesser White-fronted Goose <i>Anser erythropus</i>	Vulnerable	N / A	3.0.1	2	10	DERP
Lesser Magellan Goose <i>Chloephaga p. picta</i>	Least Concern	N / A	1.2.0	2	5	
Ashy-headed Goose <i>Chloephaga poliocephala</i>	Least Concern	N / A	0.1.0	1	10	Phase In
Ruddy-headed Goose <i>Chloephaga rubudiceps</i>	Least Concern	N / A	1.1.0	2	10	Phase In
Flying Steamer Duck <i>Tachyeres patachonicus</i>	Least Concern	29	2.4.0	1	20	Not Recommended
Muscovy Duck <i>Cairina moschata</i>	Least Concern/ CITES III	38	9.3.1	6	10	Phase Out
Wood Duck <i>Aix sponsa</i>	Least Concern	34	206.141.15	60	380	DERP
Patagonia Crested Duck <i>Anas s. specularioides</i>	Least Concern	35	2.2.0	3	20	Phase In
Garganey Teal <i>Anas querquedula</i>	Least Concern	N / A	2.0.0	2	20	Phase Out
Argentine Cinnamon Teal <i>Anas c. cyanoptera</i>	Least Concern	N / A	1.0.0	1	5	Not Recommended

Species Name	Conservation Status	Selection Score	Current Pop.* <small>based on space survey results</small>	Current Institutions	Spaces Available	Previous Program
Gadwall <i>Anas strepera</i>	Least Concern	38	10.13.6	7	50	Phase Out
Eurasian Wigeon <i>Anas penelope</i>	Least Concern	38	6.5.0	7	20	Phase Out
South Bahama Pintail <i>Anas b. rubrirostris</i>	Least Concern	N / A	1.0.0	1	5	
Yellow-billed Pintail <i>Anas georgica</i>	Least Concern	36	9.2.6	2	20	Phase Out
Grey Teal <i>Anas gibberifrons</i>	Least Concern	N / A	3.5.3	0	15	Phase Out
European Green-winged Teal <i>Anas crecca</i>	Least Concern	37	2.2.0	2	5	Not Recommended
Yellow-billed Teal <i>Anas flavirostris</i>	Least Concern	36	1.0.0	1	0	
Chilean Teal <i>Anas f. flavirostris</i>	Least Concern	N / A	1.3.0	1	5	Phase Out
African Black Duck <i>Anas sparsa</i>	Least Concern	37	3.2.0	4	5	Phase Out
Meller's Duck <i>Anas melleri</i>	Endangered	28	2.2.0	1	5	Phase In
Pacific Black Duck <i>Anas superciliosa</i>	Least Concern	N / A	0.1.0	1	0	
Philippine Duck <i>Anas luzonica</i>	Vulnerable	N / A	3.1.0	2	10	Phase In
Mallard <i>Anas platyrhynchos</i>	Least Concern	40	25.24.3	14	50	Phase Out

Species Name	Conservation Status	Selection Score	Current Pop.* based on space survey results	Current Institutions	Spaces Available	Previous Program
Eastern (Chinese) Spot-billed Duck <i>Anas poecilorhyncha zonorhyncha</i>	Least Concern	34	3.3.0	1	10	Not Recommended
Pink-eared Duck <i>Malacorhynchus membranaceus</i>	Least Concern	N / A	0.1.0	1	15	Phase In
Redhead Pochard <i>Aythya americana</i>	Least Concern	37	89.93.24	30	200	DERP
White-eye Pochard <i>Aythya australis</i>	Least Concern	N / A	1.3.0	2	10	Phase In
Baer's Pochard <i>Aythya baeri</i>	Endangered	28	3.4.0	1	20	Phase In
Ferruginous Pochard <i>Aythya nyroca</i>	Near Threatened	34	28.10.12	8	40	
New Zealand Scaup <i>Aythya novaeseelandiae</i>	Least Concern	N / A	1.2.0	2	5	Phase Out
Ring-necked Duck <i>Aythya collaris</i>	Least Concern	37	8.5.0	7	40	Phase Out
American Eider <i>Somateria mollissima dresseri</i>	Least Concern	na	2.0.0	2	15	Phase In
Greater Scaup <i>Aythya marila</i>	Least Concern	33	2.3.0	2	10	Phase Out
Southern Pochard <i>Netta erythrophthalma</i>	Least Concern	38	5.4.0	3	15	
Common Eider <i>Somateria mollissima</i>	Least Concern	29	3.4.0	1	15	Phase Out
Pacific Eider <i>Somateria m. v-nigra</i>	Least Concern	N / A	1.1.0	1	5	Phase Out

Species Name	Conservation Status	Selection Score	Current Pop.* <small>based on space survey results</small>	Current Institutions	Spaces Available	Previous Program
Harlequin Duck <i>Histrionicus histrionicus</i>	Least Concern	28	12.16	6	60	Phase In
Long-tailed (Oldsquaw) Duck <i>Clangula hyemalis</i>	Least Concern	31	6.6.0	3	25	Phase In
American Black Scoter <i>Melanitta n. americana</i>	Least Concern	N / A	0.1.0	1	10	Not Recommended
White-winged Scoter <i>Melanitta fusca</i>	Least Concern	30	5.4.0	2	15	Phase Out
Red-breasted Merganser <i>Mergus serrator</i>	Least Concern	34	8.8.0	5	60	Not Recommended
Scaly-sided Merganser <i>Mergus squamatus</i>	Endangered	28	2.2.0	1	20	Not Recommended
Common Merganser <i>Mergus merganser</i>	Least Concern	N / A	0.1.0	1	10	
European Merganser <i>Mergus m. merganser</i>	Least Concern	N / A	1.0.0	1	5	
Masked Duck <i>Oxyura dominica</i>	Least Concern	33	3.3.0	1	10	<i>In Situ</i>
White-headed Duck <i>Oxyura leucocephala</i>	Endangered/ CITES II	29	6.7.0	4	30	Phase In
Maccoa Duck <i>Oxyura maccoa</i>	Near Threatened	N / A	0.1.0	1	5	Phase In
Argentine Black-billed Duck <i>Oxyura vittata</i>	Least Concern	34	3.5.0	3	10	Phase In
Old World Comb Duck <i>Sarkidiornis m. melanotos</i>	Least Concern	30	2.5.0	5	40	Phase In

TABLE 4: PHASE-IN (PI) SPECIES

Species Name	Conservation Status	Selection Score	Current Population	Current Institutions	Spaces Available	Previous Program
South American Comb Duck <i>Sarkidiornis m. sylvicola</i>	Least concern	N / A	0	0	10	Phase In
Green Pygmy Goose <i>Nettapus pulchellus</i>	Least concern	N / A	3.3	2	20	Not Recommended
Torrent Duck <i>Merganetta armata</i>	Least concern	N / A	0	0	10	<i>In Situ</i>



Figure 15: Green Pygmy Goose (Andy Kemerer)



Figure 16 Torrent Ducks (Tadeusz Stawarczyk)

TABLE 5: NOT RECOMMENDED SPECIES (NR)

Species Name	Conservation Status	Selection Score	Current Population	Current Institutions	Spaces Available	Previous Program
Horned Screamer <i>Anhima cornuta</i>	Least Concern	N / A	0	0	0	Not Recommended
Wandering Whistling Duck <i>Dendrocygna arcuata</i>	Least Concern	N / A	0	0	0	Not Recommended
Australian Wandering Whistling Duck <i>Dendrocygna a. australis</i>	Least Concern	N / A	0	0	0	Not Recommended
Bewick's Swan <i>Cygnus columbianus bewickii</i>	Least Concern	N / A	0	0	0	
Atlantic Canada Goose <i>Branta c. canadensis</i>	Not Listed	N / A	0	0	0	
Richardson's Canada Goose <i>Branta c. hutchinsii</i>	Least Concern	N / A	0	0	0	Phase Out
Central Canada Goose <i>Branta c. interior</i>	Least Concern	N / A	0	0	0	Phase Out
Russian Brant Goose <i>Branta b. bernicla</i>	Least Concern	N / A	0	0	0	
Atlantic Brant Goose <i>Branta b. hrota</i>	Least Concern	N / A	0	0	0	Phase Out
Bean Goose <i>Anser fabalis</i>	Least Concern	N / A	0	0	0	
Tundra Bean Goose <i>Anser serrirostris</i>	Least Concern	N / A	0	0	0	
Pink-footed Goose <i>Anser brachyrhynchus</i>	Least Concern	N / A	0	0	0	

Species Name	Conservation Status	Selection Score	Current Population	Current Institutions	Spaces Available	Previous Program
Kelp Goose <i>Chloephaga hybrida</i>	Least Concern	N / A	0	0	0	
Greater Magellan Goose <i>Chloephaga picta leucoptera</i>	Least Concern	N / A	0	0	0	Phase Out
Radjah Shelduck <i>Tadorna radjah</i>	Least Concern		0	0	0	
White-headed Steamer Duck <i>Tachyeres leucocephalus</i>	Near Threatened	N / A	0	0	0	
Flightless (Magellanic) Steamer Duck <i>Tachyeres pteneres</i>	Least Concern	N / A	0	0	0	
Falkland Steamer Duck <i>Tachyeres brachypterus</i>	Least Concern	N / A	0	0	0	
Comb Duck <i>Sarkidiornis melanotos</i>	Least Concern/ CITES III	N / A	0.1.0	1	0	
Blue Duck <i>Hymenolaimus malacorhynchos</i>	Endangered	N / A	0	0	0	
Salvadori's Duck <i>Salvadorina waigiensis</i>	Vulnerable	N / A	0	0	0	
Crested Duck <i>Anas specularioides</i>	Least Concern	N / A	0	0	0	

The background of the entire page is a complex marbled paper pattern. It features swirling, organic shapes in various shades of blue, brown, tan, and black, creating a rich, textured appearance. The pattern is dense and covers the entire surface.

Species Profiles

Crested Screamer

Chauna torquata



Figure 17: Southern Screamer (Claudio Timm)

IUCN Status: Least Concern

CITES: Not Listed

AZA Population: 52.44.11 (107)

Number of U.S. Institutions: 48

Target Population: 150

Status: SSP Yellow

SSP Coordinator:

Michael Macek, St. Louis Zoo

mmacek@stlzoo.org

(314) 646-4825

The crested (southern) screamer weighs in at 6.6-11 pounds, and may be identified by its predominantly grey plumage, with bits of brown and black. This species inhabits tropical and sub-tropical swamps, estuaries, and watersides in Bolivia, Brazil, Peru, Paraguay, Argentina, and Uruguay. Diet consists of plants, seeds, insects, and arthropods. Lifespan is estimated 15 years, with sexual maturity reached at two years of age.

The crested screamer is monogamous, with bonds that may last from several years to the entire lifetime. Nests are constructed in or near the water from reeds, straw, and aquatic plants. Typical clutch size is 2-7 eggs, with an incubation period of 43-46 days.

Screamers are attractive to collections due to their uniqueness (waterfowl which lack webbed feet and possess wing spurs for fighting / defense). They are also among the loudest of all birds. Population in the wild is stable, but under increasing pressure from hunting and habitat destruction.

West Indian Whistling Duck

Dendrocygna arborea



Figure 18: West Indian Whistling Duck (Dick Daniels)

IUCN Status: Vulnerable

CITES: II

AZA Population: 23.20.34 (77)

Number of U.S. Institutions: 11

Target Population: 100

Status: Studbook Red

Species Coordinator:

Keith Lovett, Palm Beach Zoo

klovett@palmbeachzoo.org

(561) 833-7130 x213

The West Indian whistling duck (a.k.a Cuban whistling duck or black-billed whistling duck) is the largest of all whistling duck species. Both sexes have dark brown upper bodies with light bellies and dark spots on the flanks. As their name suggests, they have black bills and emit a shrill vocalization. Once widespread throughout the Caribbean, their range has narrowed, resulting in fragmented populations. Hunting and wetland degradation have reduced population numbers for this species. Due to their restricted range, this species is listed as Vulnerable.

West Indian whistling ducks are generally cavity nesters, laying between 4-16 eggs. They are considered crepuscular or nocturnal, foraging for seeds and fruits overnight and roosting during daylight hours. The species is gregarious, and does best when kept in large groups.

Spotted Whistling Duck

Dendrocygna guttata



Figure 19: Spotted Whistling Duck (Tom Tarrant)

IUCN Status: Vulnerable

CITES: Not Listed

AZA Population: 3.5.7 (15)

Number of U.S. Institutions: 2

Target Population: 25

Status: Studbook Red

Species Coordinator:

Keith Lovett, Palm Beach Zoo

klovett@palmbeachzoo.org

(561) 833-7130 x213

The spotted whistling duck average 800 grams in weight, and has predominantly brown plumage speckled with white spots. This species inhabits lakes, marshes, and freshwater swamps throughout Australia, Indonesia, Papua New Guinea, and the Philippines. Diet consists of aquatic plants, seeds, and insects.

The spotted whistling duck is monogamous. Nesting occurs in tree hollows near the water, with clutch size ranging from 7-14 eggs, with a 31 day incubation period.

While this species has always existed in captive populations in small numbers, North America had the largest population of this species as of the last RCP. The wild population is currently under little-to-no threat, but the Anseriformes TAG felt the exhibit value of this species warranted a formal program.

Coscoroba Swan

Coscoroba coscoroba



Figure 20: Coscoroba Swan (Dick Daniels)

IUCN Status: Least Concern

CITES: Not Listed

AZA Population: 20.27.1 (48)

Number of U.S. Institutions: 20

Target Population: 75

Status: Studbook Red

Species Coordinator:

Ann Konopik, Salisbury Zoo

akonopik@ci.salisbury.md.us

(410) 548-3117 x7

The coscoroba swan averages 9.3 pounds, and has all-white plumage except for black tips on the outer six primary feathers. This species inhabits well-vegetated ponds, swamps, and lagoons throughout Chile, Argentina, Uruguay, southern Paraguay and southern Brazil. Diet consists of grasses, aquatic plants, insects, mollusks, and fish. The coscoroba swan can live up to 35 years, but average lifespan in the wild is 7 years, with sexual maturity reached around three years of age.

The coscoroba swan is monogamous and often mates for life. Nests are conical mounds constructed from plants and feathers. Clutch size ranges from 4-7 eggs, with a 36 day incubation period.

Trumpeter Swan

Cygnus buccinator



Figure 21: Trumpeter Swan (USFWS)

IUCN Status: Least Concern

CITES: Not Listed

AZA Population: 34.31.10 (75)

Number of U.S. Institutions: 36

Target Population: 150

Status: Studbook Red

Species Coordinator:

Matt McKim, Sacramento Zoo

mmckim@saczoo.org

(916) 808-5013

The trumpeter swan is the largest native North American bird, with an average weight of 24 pounds. This species inhabits shallow ponds and slow-moving rivers in northwestern North America. Diet consists of aquatic plants and some grasses and grains. The species can live up to 35 years, although average lifespan is 12 years, with sexual maturity reached at three years of age.

The trumpeter swan is monogamous and often mates for life. Nests are mounds constructed of plant material, typically situated on little islands in a pond. Clutch size ranges from 3-12 eggs, with a 32-37 day incubation period.

Hawaiian (Nene) Goose

Branta sandvicensis



Figure 22: Hawaiin Goose (USFWS)

IUCN Status: Vulnerable

CITES: I

USFWS: Endangered

AZA Population: 48.47.3 (98)

Number of U.S. Institutions: 20

Target Population: 150

Status: SSP Yellow

SSP Coordinator:

Ken Reiniger, North Carolina Zoo

ken.reiniger@nczoo.org

(336) 879-7610

The Hawaiian (nene) goose averages 4.5 pounds, and has a black head, cream cheeks, and a grey body with transverse barring. Endemic to the Hawaiian islands of Maui, Kauai and Hawaii, the Hawaiian goose inhabits shrubland, grassland, coastal dunes, lava plains, and anthropogenic environments (such as pastures and golf courses). Diet consists of leaves, seeds, fruit, flowers, insects, and fish. Lifespan is 35 years or more, with sexual maturity reached at three years of age.

The Hawaiian goose is monogamous, often mating for life. Nests are constructed on the ground under low shrubs. Clutch size ranges from 1-5 eggs, with a 29-32 day incubation period.

White-winged Wood Duck

Cairina scutulata

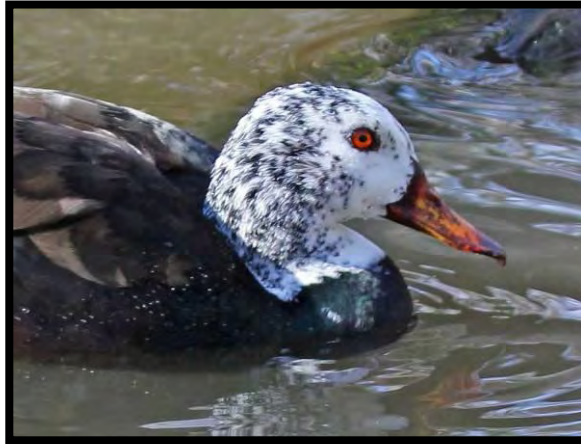


Figure 23: White-winged Wood Duck (Dick Daniels)

IUCN Status: Endangered

CITES: Not Listed

USFWS: Endangered

AZA Population: 49.56.8 (113)

Number of U.S. Institutions: 13

Target Population: 150

Status: SSP Yellow

SSP Coordinator:

Jim Metzinger, Akron Zoo

jmetziner@akronzoo.org

(330) 375-2550 x7268

The white-winged wood duck weighs an average of 6.5 pounds, and has a white head and black body with conspicuous white patches on the wings. This species inhabits dense tropical evergreen forests, near rivers and swamps in India, Bangladesh, Indonesia, and Myanmar. Diet consists of seeds, aquatic plants, grain, rice, snails, small fish and insects.

The white-winged wood duck is monogamous, and nests in tree forks and hollows. Clutch sizes range from 1-15 eggs, with a 30 day incubation period.

This species serves as a rallying point for field conservation work in Southeast Asia. Maintaining a healthy population of birds in North America is seen as a critical component of this conservation effort, enabling funding opportunities not easily accessible without such a population. It is highly unlikely that birds currently in North America would ever be re-introduced to the wild.

Existence of a captive population in North America has enabled important research into care and management of this species. A five-year-old partnership between Akron Zoo and Hiram College has focused on causes of illness (especially the species' susceptibility to avian tuberculosis) and its prevention. This information is critical before a more genetically diverse population of ducks can be established. In addition, the Anseriformes TAG supported research by graduate student Nancy Drilling (University of Minnesota) into limitations on white-winged wood duck populations on Sumatra. Ms. Drilling also developed survey and capture techniques for this very secretive bird.

A captive population has also made possible outreach activities focused on damage caused by over-logging in Sumatra and Cambodia, forest fire damage, and drainage of important wetlands. The Endangered Waterfowl Propagation and Research Center at Hiram College – established through partnership with Akron Zoo, Hiram College, and Sylvan Heights Waterfowl – has allowed students in biology and behavior to take an active part in research for the benefit of this species. The Center's primary focus is veterinary medical husbandry of white-winged wood ducks, and is expected to assist in future management of the species in captivity and in the wild.

Much of the field work in Cambodia between 2007-2008 was supported by the Wildlife Conservation Society, Akron Zoo, White Oak / Gilman Foundation, and the Knight Foundation.

Projected available space for this species in 2014 includes 50 birds in the private sector. Actual AZA available space is projected at 102 birds.

Swan Goose

Anser cygnoides



Figure 24: Swan Goose (Andy Kemerer)

IUCN Status: Vulnerable

CITES: Not Listed

AZA Population: 37.31.0 (68)

Number of U.S. Institutions: 9

Target Population: 100

Status: SSP Yellow

SSP Coordinator:

Mark O'Berry, Disney's Animal Kingdom

mark.a.oberry@disney.com

(561) 504-3912

The swan goose averages 7 pounds and has greyish-brown plumage and a black bill. This species inhabits steppe wetlands, lakes and rivers throughout southeastern Russia, Mongolia, China, North Korea, and South Korea. Diet consists primarily of grasses and sedges. Average lifespan is 10 years, with sexual maturity reached around 2-3 years of age.

The swan goose is monogamous, often mating for life. Nests are constructed from plants and feathers, and situated on the ground near water. Clutch size ranges from 5-8 eggs, with a 30 day incubation period.

The existing population requires intensive management to maintain wild lineages, as intergrade populations with domestic Chinese geese are present in North America. A significant goal of this program is monitoring and removing potential hybrids. The wild population is also under threat; a contingency population has been established from known genetic stock out of the European zoo community.

African Pygmy Goose

Nettapus auritus



Figure 25: African Pygmy Goose (Andy Kemerer)

IUCN Status: Least Concern

CITES: Not Listed

AZA Population: 29.33.10 (72)

Number of U.S. Institutions: 17

Target Population: 150

Status: SSP Yellow

SSP Coordinator:

Stephanie Allard, Palm Beach Zoo

sdampier@palmbeachzoo.org

(561) 833-7130 x253

The African pygmy goose is a small perching duck, weighing an average of 270 grams. Aside from their petite stature, they may be recognized by their white face and green plumage on ears and back. This species inhabits swamps, marshes, inland deltas, slow-flowing rivers, and ponds throughout Sub-Saharan Africa and Madagascar. Diet consists of aquatic vegetation, seeds, and insects. The lifespan of this species is 10-15 years, with sexual maturity reached at two years of age.

When resources are abundant, males often keep a harem of females; however, in poorer quality habitats monogamy prevails. Females often nest in tree hollows near water, and clutch size ranges from 6-12 eggs, with a 23 day incubation period.

Species was subject of ~10 years of behavior research (ending in late-1990's), focusing on complex mating ritual and pair bonding. Useful education bird, due to conservation message and interesting life-history as a cavity nester. Target Population size includes non-AZA birds.

Indian Pygmy Goose

Nettapus coromandelianus



Figure 26: Indian Pygmy Goose (Andy Kemerer)

IUCN Status: Least Concern

CITES: Not Listed

AZA Population: 23.23.6 (52)

Number of U.S. Institutions: 13

Target Population: 75

Status: SSP Yellow

SSP Coordinator:

Stephanie Allard, Palm Beach Zoo

sdampier@palmbeachzoo.org

(561) 833-7130 x253

The Indian pygmy goose (a.k.a. cotton pygmy goose, cotton teal) is a small perching duck with an average weight around 380 grams. In addition to their diminutive size, they may be recognized by their grey-brown plumage and white underparts. This species inhabits swamps, marshes, lakes, and paddy fields throughout Pakistan, India, Bangladesh, Southeast Asia, and Australia. Diet consists of aquatic vegetation, seeds, and insects. Lifespan of this species is 10-25 years, with sexual maturity reached at two years of age.

The Indian pygmy goose is generally monogamous. Females nest in tree hollows near water. Average clutch size ranges from 6-12 eggs, with a 23 day incubation period.

Target population size includes non-AZA birds.

Marbled Teal

Marmaronetta angustirostris



Figure 27: Marbled Teal (Andy Kemerer)

IUCN Status: Vulnerable

CITES: Not Listed

AZA Population: 85.70.10 (165)

Number of U.S. Institutions: 26

Target Population: 250

Status: SSP Yellow

SSP Coordinator:

Harrison Edell, Sacramento Zoo

rhedell@saczoo.org

(916) 808-7381

The marbled teal is a medium-sized diving duck that averages 308 grams, and is a sandy-brown in color with diffused white blotches. This species inhabits fresh and brackish shallow pools, boggy lakes, and marshes in southern Spain, northwest Africa, and the Middle East, with smaller populations documented as far as western China. Dietary intake consists of aquatic vegetation, seeds, and insects. The lifespan of this species is 20-30 years, with sexual maturity reached at one year of age.

The marbled teal is generally monogamous. Nests are constructed in tall grasses near water, and clutch sizes range from 9-12 eggs, with a 25 day incubation period.

Madagascar Teal

Anas bernieri



Figure 28: Madagascar Teal (Dick Daniels)

IUCN Status: Endangered
CITES: II

AZA Population: 30.33.1 (64)
Number of U.S. Institutions: 12
Target Population: 100
Status: Studbook Red
Species Coordinator:
VACANT

The Madagascar teal (a.k.a. Bernier's teal) is a predominantly brown duck with black scalloping, weighing an average of 400 grams. This species is endemic to the west coast of Madagascar, and inhabits mangrove swamps during the wet season, and lake edge and estuarine mudflats during the dry season. Diet consists of plants, seeds, and insects. The average lifespan of the species is 10-25 years.

The Madagascar teal is generally monogamous, with breeding occurring during the wet season. Nests are constructed near the water from grass and reeds. Average clutch size is 6-7 eggs, with a 27 day incubation period.

Among the rarest of all waterfowl, the species was believed extinct for nearly 100 years until its re-discovery on Madagascar in 1969. The story of its rediscovery illustrates many principles of conservation biology, and makes the Madagascar teal an excellent representative of the perils faced by endemic island species.

The North American population exists at the request of the Jersey Wildlife Preservation Trust and the Government of Madagascar. The Endangered Waterfowl Propagation and Research Center at Hiram College played a role in establishing the North American security population. This population is currently breeding at several facilities, but will require genetic management if it is to have potential for future re-introduction.

Red-breasted Goose

Branta ruficollis



Figure 29: Red-breasted Goose (Andy Kemerer)

IUCN Status: Endangered

CITES: II

AZA Population: 27.27.1 (55)

Number of U.S. Institutions: 15

Target Population: 100

Status: Studbook Red

Species Coordinator:

VACANT

The red-breasted goose averages 3 pounds, and has predominantly black plumage with white accent lines and a red foreneck, breast, and cheek patches. It is a highly migratory species, flying south to the steppe grasslands of Romania and Bulgaria in September, and returning north to the Taimyr, Gydan, and Yamal peninsulas in the Russian tundra between March and May. Diet consists of grass, leaves, sedges, and cereals such as wheat, barley, and maize. Lifespan is an estimated 15 years, with sexual maturity reached at three years of age.

The red-breasted goose is monogamous, although polygamy has been reported in captivity. Nests are constructed with down and vegetation on steep banks and cliffs, usually in close proximity to birds of prey, which help protect their nests from foxes and gulls. Clutch size ranges from 3-7 eggs, with an 25 day incubation period.

Orinoco Goose

Neochen jubata



Figure 30: Orinoco Goose (Roar Johansen)

IUCN Status: Near Threatened
CITES: Not Listed

AZA Population: 17.27.18 (62)
Number of U.S. Institutions: 8
Target Population: 100
Status: Studbook Red
Species Coordinator:
VACANT

The Orinoco goose is small, weighing an average of 3.2 pounds, with a pale head and neck, chestnut flanks and mantle, and black wings. This species inhabits forest-covered riverbanks, wet savannas, and edges of large freshwater wetlands throughout northern South America, east of the Andes Mountains. Diet consists of grasses, sedges, insects, and small mollusks. Lifespan is estimated at 15 years, with sexual maturity reached at two years of age.

The Orinoco goose forms strong pair bonds, and is highly territorial in the breeding season. Nesting generally occurs in tree hollows. Clutch size ranges from 6-10 eggs, with an incubation period of 30 days.

Raft Program Description

The TAG recognizes that, while a number of species are being managed through SSP Green, SSP Yellow, and Studbook Red programs, there has been a serious decline in many waterfowl species. In response, the “Raft Management Program” was developed by TAG Vice-Chair Steve Sarro (National Aviary) with the assistance of TAG Secretary Jackie Peeler (Henson Robinson Zoo).

There are six “Rafts,” each covering 10-17 waterfowl species. Recruitment for “Raft Champions” was posted in *Communiqué* and *Animal Keepers Forum*. The response was significant, and elections were held to install the first set of Champions. In 2004, Raft Champions were charged with creating species husbandry profiles, and with tracking annual demographic changes to their Raft groups. A Vice Champion position for each Raft was created in 2007. The Raft program has not been as successful as anticipated. Members of the zoo field are not utilizing Raft Champions as experts for their species in the manner hoped, so the TAG will be re-evaluating the overall efficacy of the Raft program. Meanwhile, annual monitoring will continue.

Fred Beall and Ed O’Brien (Zoo New England) compile annual numbers to track trends in all Raft species. According to the latest demographic information available through ISIS, 68% of the 82 Raft species represented in the RCP have suffered population declines. Twenty-eight percent of Raft species have seen a population increase, while the remaining 4% have held steady. Plans to institute a new Captive Propagation Rescue (CPR) Raft were put on hold when it became obvious that many of the species in question may now be considered Phase IIs according to new species selection criteria. Maintaining a healthy diversity of TAG-identified Raft species is still an important part of wetlands conservation education, as these species highlight the challenges faced by wetlands and other ecosystems where these species naturally occur. Fred Beall and Ed O’Brien will continue to annually monitor population numbers and trends.

Raft Species Trends: The summary below lists 35 species that have lost greater than 20% of their starting population (red text >50% loss). This represents 43.2% of the monitored species. An additional 16 species have lost less than 20%. Therefore, a total of 51 out of 81 (63%) monitored species have declining populations. The remaining 30 species are either flat (neither gained nor lost population) or have gained population. There needs to be a call to action to reverse these trends.

TABLE 6: RAFT SPECIES TRENDS

	Species	Starting Population	Current Population	Starting # of Holding Institutions	Current # of Holding Institutions	Population Decline	% Population Declined
Raft #1	Cape Barren goose	30	24	18	16	-6	-20.00%
	Old world comb duck	11	8	4	4	-3	-27.27%
	Freckled duck	2	0	2	0	-2	-100.00%
Raft #2	Lesser white-fronted goose	12	6	5	3	-6	-50.00%
	Ross's goose	17	5	4	3	-12	-70.59%
	Aleutian Canada goose	27	9	4	3	-18	-66.67%
	Barnacle goose	47	29	12	11	-18	-38.30%
	Red-breasted goose	68	48	17	18	-20	-29.41%
Raft #3	Cape teal	109	66	19	15	-43	-39.45%
	Brownze-winged duck	13	10	5	4	-3	-23.08%
	American black duck	65	32	9	10	-33	-50.77%
	African yellow-billed duck	67	19	13	4	-48	-71.64%
	Northern cinamon teal	50	39	9	8	-11	-22.00%
Raft #4	Red shoveler	47	14	9	8	-33	-70.21%
	New Zealand shoveler	17	11	3	4	-6	-35.29%
	Northern shoveler	137	98	32	28	-39	-28.47%
	Bahama Pintail	164	108	33	25	-56	-35.15%
	Red-billd pintail	45	34	6	6	-11	-24.44%
	Baikal	23	15	10	7	-8	-34.78%
	Silver teal	10	3	4	1	-7	-70.00%
	Hottentot teal	113	67	29	24	-46	-40.71%
	Puna teal	40	8	8	4	-32	-80.00%
	Chestnut teal	38	22	14	12	-16	-42.11%
Raft #5	Western Hartlaub's	15	8	7	5	-7	-46.67%
	Austrailian wood duck	35	12	12	8	-23	-65.71%
	Brazilian teal	45	25	11	6	-17	-40.48%
	Ruddy-headed goose	10	6	4	3	-4	-40.00%
	Paradise shelduck	15	10	5	7	-5	-33.33%
Raft #6	Common golden-eye	33	22	11	7	-11	-33.33%
	American eider	10	4	2	1	-6	-60.00%
	Hooded merganser	479	365	72	69	-114	-23.80%
	American merganser	13	2	6	1	-11	-84.62%
	Ruddy duck	491	348	50	48	-143	-34.88%
	Red-crested pochard	212	113	32	23	-99	-46.70%
	Canvasback	141	93	28	23	-48	-34.04%

APPENDIX

2010 Space Survey

Common Name	Taxonomic Name	Sex ratio of specimens currently in collection (e.g., 2.2.1)				Sex ratio of specimens that you plan to have in collection in three years?		
		Male	Female	Unknown		Male	Female	Unknown
<u>Screamers</u>								
Horned Screamer	<i>Anhima cornuta</i>	0	0	0		0	0	0
Northern Screamer	<i>Chauna chavaria</i>	2	1	0		2	2	0
Southern Screamer	<i>Chauna torquata</i>	40	32	3		41	39	5
<u>Anseranatini (Magpie Goose)</u>								
Magpie goose	<i>Anseranas semipalmata</i>	22	26	2		22	28	0
<u>Dendrocygnini (Whistling or Tree Ducks)</u>								
West Indian whistling duck	<i>Dendrocygna arborea</i>	18	17	1		24	24	0
Wandering whistling duck	<i>Dendrocygna arcuata</i>	0	0	0		0	0	0
East Indian wandering whistling duck	<i>Dendrocygna a. arcuata</i>	3	3	0		11	11	0
Australian wandering whistling duck	<i>Dendrocygna a. australis</i>	0	3	0		0	6	0
Black-bellied whistling duck	<i>Dendrocygna autumnalis</i>	23	52	28		66	75	35
Northern black-bellied	<i>Dendrocygna a. autumnalis</i>	3	3	6		4	3	6
Southern black-bellied	<i>Dendrocygna a. discolor</i>	0	0	0		0	0	0
Fulvous whistling duck	<i>Demdrocygna bicolor</i>	59	42	69		115	107	50
Plumed (Eyton's) whistling duck	<i>Dendrocygna eytoni</i>	13	10	0		28	22	0
Spotted whistling duck	<i>Dendrocygna guttata</i>	1	1	0		5	5	0
Lesser Indian whistling duck	<i>Dendrocygna javanica</i>	9	7	0		10	10	0
White-faced whistling duck	<i>Dendrocygna viduata</i>	194	217	48		275	284	37
White-backed duck	<i>Thalassornis leuconotus</i>	2	4	0		7	9	0

Common Name	Taxonomic Name	Sex ratio of specimens currently in collection (e.g., 2.2.1)			Sex ratio of specimens that you plan to have in collection in three years?		
<u>Anserini (Swans & True Geese)</u>							
<u>Swans</u>							
Coscoroba	<i>Coscoroba coscoroba</i>	20	23	4	19	27	0
Black	<i>Cygnus atratus</i>	45	74	7	44	75	5
Whistling	<i>Cygnus columbianus</i>	7	11	1	10	8	0
Bewick's	<i>Cygnus c. bewickii</i>	0	0	0	0	0	0
Trumpeter	<i>Cygnus buccinator</i>	32	36	21	33	35	16
Whooper	<i>Cygnus cygnus</i>	2	3	0	3	3	0
Black-necked	<i>Cygnus melancoryphus</i>	28	39	5	30	41	4
Mute	<i>Cygnus olor</i>	22	21	13	14	15	6
<u>True Geese</u>							
Canada goose	<i>Branta canadensis</i>	10	14	27	10	11	23
Atlantic Canada goose	<i>Branta c. canadensis</i>	0	0	0	0	0	0
Richardson's Canada goose	<i>Branta c. hutchinsii</i>	0	0	0	0	0	0
Central Canada goose	<i>Branta c. interior</i>	0	0	0	0	0	0
Aleutian Canada goose	<i>Branta c. leucopar</i>	2	6	0	3	3	0
Giant Canada goose	<i>Branta c. maxima</i>	4	9	0	3	10	0
Cackling Canada goose	<i>Branta c. minima</i>	1	1	5	3	4	4
Dusky Canada goose	<i>Branta c. occidentalis</i>	0	1	0	0	0	0
Lesser Canada goose	<i>Branta c. parvipes</i>	1	1	0	2	2	0
Hawaiian (Nene) goose	<i>Branta sandvicensis</i>	41	38	1	42	50	0
Brant goose	<i>Branta bernicla</i>	1	0	0	3	2	0
Russian Brant goose	<i>Branta b. bernicla</i>	0	0	0	0	0	0
Atlantic Brant goose	<i>Branta b. hrota</i>	0	0	0	2	2	0
Pacific Brant goose	<i>Branta b. orientalis</i>	4	2	0	3	3	0
Barnacle goose	<i>Branta leucopsis</i>	5	10	0	10	13	0
Red-breasted goose	<i>Branta ruficollis</i>	25	26	1	43	44	0
Emperor goose	<i>Anser canagica</i>	3	4	0	8	9	6

Common Name	Taxonomic Name	Sex ratio of specimens currently in collection (e.g., 2.2.1)				Sex ratio of specimens that you plan to have in collection in three years?		
Snow goose	<i>Anser caerulescens</i>	5	1	57		15	13	51
Ross's goose	<i>Anser rossii</i>	1	2	2		8	8	0
Swan goose	<i>Anser cygnoides</i>	30	30	0		42	43	6
Bean goose	<i>Anser fabalis</i>	0	0	0		0	0	0
Tundra Bean goose	<i>Anser serrirostria</i>	0	0	0		0	0	0
Pink-footed goose	<i>Anser brachyrhynchus</i>	0	0	0		0	0	0
Graylag goose	<i>Anser anser</i>	2	6	3		2	3	0
Greater white-fronted goose	<i>Anser albifrons</i>	0	1	5		2	2	5
Lesser white-fronted goose	<i>Anser erythropus</i>	3	0	1		4	4	0
Bar-headed goose	<i>Anser indicus</i>	68	65	7		84	82	5
<u>Cereopsini (Cape Barren Goose)</u>								
Cape Barren Goose	<i>Cereopsis novaehollandiae</i>	6	9	0		12	16	0
<u>Stictonettini (Freckled Duck)</u>								
Freckled duck	<i>Stictonetta naevosa</i>	0	0	0		2	2	0
<u>Tadornini (Sheldgeese & shelducks)</u>								
<u>Shelgeese</u>								
Kelp goose	<i>Chloephaga hybrida</i>	0	0	0		0	0	0
Andean goose	<i>Chloephaga melanoptera</i>	7	3	0		6	6	0
Magellanic goose	<i>Chloephaga picta</i>	1	2	0		2	2	0
Greater Magellanic goose	<i>Chloephaga p. leucoptera</i>	0	0	0		0	0	0
Lesser Magellanic	<i>Chloephaga p. picta</i>	0	0	0		0	0	0
Ashy-headed goose	<i>Chloephaga poliocephala</i>	0	1	0		5	5	0
Ruddy-headed goose	<i>Chloephaga rubidiceps</i>	1	1	0		4	4	0
Abyssinian Blue-winged goose	<i>Cyanochen cyanopterus</i>	7	11	0		13	12	0

Common Name	Taxonomic Name	Sex ratio of specimens currently in collection (e.g., 2.2.1)				Sex ratio of specimens that you plan to have in collection in three years?		
Orinoco goose	<i>Neochen jubata</i>	17	20	6		27	28	4
Egyptian goose	<i>Alopochen aegyptiaca</i>	43	55	44		54	60	21
<u>Shelducks</u>								
Radjah shelduck	<i>Radjah radjah</i>	32	20	1		35	32	0
Common shelduck	<i>Tadorna tadorna</i>	27	44	0		30	30	0
Ruddy shelduck	<i>Tadorna ferruginea</i>	19	28	6		26	33	6
South African shelduck	<i>Tadorna cana</i>	16	14	6		19	20	0
Australian shelduck	<i>Tadorna tadornoides</i>	11	8	0		16	12	0
Paradise shelduck	<i>Tadorna variegata</i>	4	4	0		6	5	0
<u>Tachyerini (Steamer Ducks)</u>								
Flying steamer duck	<i>Tachyeres patachonicus</i>	2	4	0		10	10	0
White-headed steamer duck	<i>Tachyeres leucocephalus</i>	0	0	0		0	0	0
Flightless (Magellanic) steamer duck	<i>Tachyeres pteneres</i>	0	0	0		1	1	0
Falkland steamer duck	<i>Tachyeres brachypterus</i>	0	0	0		0	0	0
<u>Cairinini (Perching Ducks)</u>								
Gambia spur-winged goose	<i>Plectropterus g. gambensis</i>	9	5	0		11	6	0
Black spur-winged goose	<i>Plectropterus g. niger</i>	14	8	0		9	8	0
Muscovy duck	<i>Cairina moschata</i>	9	3	1		2	3	1
White-winged wood duck	<i>Caitina scutulata</i>	15	14	7		22	22	0
Comb duck	<i>Sarkidiornis melanotos</i>	0	1	0		2	3	0
South American comb duck	<i>Sarkidiornis m. sylvicola</i>	0	0	0		4	4	0
Old world comb duck	<i>Sarkidiornis m. melanotos</i>	2	4	0		16	19	0
Hartlaub's duck	<i>Pteronetta hartlaubii</i>	1	4	0		4	4	0
Eastern Hartlaub's duck	<i>Pteronetta h. albifrons</i>	0	2	0		1	2	0
Western Hartlaub's duck	<i>Pteronetta h. hartlaubii</i>	2	0	0		2	2	0
African pygmy goose	<i>Nettapus auritus</i>	22	26	1		39	40	0

Common Name	Taxonomic Name	Sex ratio of specimens currently in collection (e.g., 2.2.1)			Sex ratio of specimens that you plan to have in collection in three years?		
Cotton pygmy goose	<i>Nettapus coromandelianus</i>	12	13	0	18	18	0
Green pygmy goose	<i>Nettapus pulchellus</i>	3	3	0	7	7	0
Ringed teal	<i>Callonetta leucophrys</i>	157	137	15	139	145	5
Wood duck	<i>Aix sponsa</i>	206	141	15	194	170	1
Mandarin duck	<i>Aix galericulata</i>	164	133	2	178	133	1
Maned (Australian wood) duck	<i>Chenonetta jubata</i>	3	1	0	9	9	0
Brazilian teal	<i>Amazonetta brasiliensis</i>	5	10	0	18	19	0
<u>Merganettini (Torrent Duck)</u>							
Torrent duck	<i>Merganetta armata</i>	0	0	0	4	4	0
<u>Anatini (Dabbling Ducks)</u>							
Blue duck	<i>Hymenolaimus malacorhynchos</i>	0	0	0	0	0	0
Savadori's teal	<i>Salvadorina waigiensis</i>	0	0	0	0	0	0
Crested duck	<i>Anas specularioides</i>	0	0	0	3	3	0
Patagonian crested duck	<i>Anas s. specularioides</i>	2	2	0	7	6	0
Baikal teal	<i>Sibirionetta formosa</i>	9	8	0	33	28	0
Garganey teal	<i>Anas querquedula</i>	2	0	0	9	8	0
Hottentot teal	<i>Punanetta hottentota</i>	28	23	9	46	45	0
Silver teal	<i>Punanetta versicolor</i>	1	4	0	6	6	0
Puna teal	<i>Punanetta puna</i>	8	6	0	21	22	0
Red shoveler	<i>Spatula platalea</i>	11	7	1	23	22	0
Blue-winged teal	<i>Anas discors</i>	30	35	2	67	67	0
Cinnamon teal	<i>Anas cyanopteria</i>	33	29	0	58	49	0
Argentine cinnamon teal	<i>Anas c. cyanopteria</i>	1	0	0	1	1	0
Andean cinnamon teal	<i>Anas c. orinomus</i>	0	0	0	1	1	0
Northern cinnamon teal	<i>Anas c. septentrionalium</i>	22	12	8	29	23	8
Cape shoveler	<i>Anas smithii</i>	0	0	0	7	7	0
Australian shoveler	<i>Anas rhynchotis</i>	5	5	0	12	12	0

Common Name	Taxonomic Name	Sex ratio of specimens currently in collection (e.g., 2.2.1)				Sex ratio of specimens that you plan to have in collection in three years?		
Northern shoveler	<i>Anas clypeata</i>	40	32	7		83	79	8
Gadwall	<i>Anas strepera</i>	10	13	6		24	25	0
Falcated duck	<i>Anas falcata</i>	9	5	0		22	20	0
Eurasian wigeon	<i>Anas penelope</i>	6	5	1		10	10	0
American wigeon	<i>Anas americana</i>	19	18	4		44	44	9
Chiloe wigeon	<i>Anas sibilatrix</i>	48	42	11		81	80	1
New Zealand brown teal	<i>Anas a. chlorotis</i>	0	0	0		0	0	0
Auckland flightless teal	<i>Anas aucklandica</i>	0	0	0		0	0	0
Campbell teal	<i>Anas a. nesiotis</i>	0	0	0		0	0	0
Cape teal	<i>Anas capensis</i>	25	16	3		27	25	3
Red-billed teal	<i>Anas erythrorhyncha</i>	9	14	0		19	21	0
White-cheeked pintail	<i>Anas bahamensis</i>	10	7	1		13	12	0
Bahama pintail	<i>Anas b. bahamensis</i>	15	11	0		28	26	0
South Bahama pintail	<i>Anas b. rubrirostris</i>	1	0	0		2	2	0
Yellow-billed pintail	<i>Anas georgica</i>	9	2	6		8	8	0
Northern pintail	<i>Anas acuta</i>	109	102	5		121	121	8
Kerguelen (Eyton's) pintail	<i>Anas eatoni</i>	0	0	0		0	0	0
Madagascan teal	<i>Anas bernieri</i>	22	36	0		17	20	0
Chestnut teal	<i>Anas castanea</i>	7	10	1		16	17	0
Andaman teal	<i>Anas g. albogularis</i>	0	0	0		0	0	0
Grey teal	<i>Anas gibberifrons</i>	3	5	3		6	7	0
Australian Grey teal	<i>Anas g. gracilis</i>	0	0	0		0	0	0
European green-winged teal	<i>Anas crecca</i>	2	2	0		2	2	0
Green-winged teal	<i>Anas c. carolinensis</i>	20	18	5		47	45	0
Yellow-billed teal	<i>Anas flavirostris</i>	11	6	0		12	12	0
Chilean teal	<i>Anas f. flavirostris</i>	1	3	0		1	3	0
Sharp-winged teal	<i>Anas f. oxyptera</i>	2	2	2		13	13	0
Andean teal	<i>Anas f. andium</i>	0	0	0		0	0	0
African black duck	<i>Anas sparsa</i>	3	2	0		3	2	0

Common Name	Taxonomic Name	Sex ratio of specimens currently in collection (e.g., 2.2.1)				Sex ratio of specimens that you plan to have in collection in three years?		
Yellow-billed duck	<i>Anas undulata</i>	13	10	1		11	9	0
Meller's duck	<i>Anas melleri</i>	2	2	0		2	2	0
Pacific black duck	<i>Anas superciliosa</i>	0	1	0		0	0	0
Laysan teal	<i>Anas laysanensis</i>	16	22	3		25	27	2
Philippine duck	<i>Anas luzonica</i>	3	1	0		4	4	0
Indian spot-billed duck	<i>Anas poecilorhyncha</i>	11	9	0		12	6	0
Mallard	<i>Anas platyrhynchos</i>	25	24	3		18	19	2
Eastern (Chinese) spot-billed duck	<i>Anas zonorhyncha</i>	3	3	0		4	4	0
Hawaiian duck	<i>Anas p. wyvilliana</i>	0	0	0		7	7	0
American black duck	<i>Anas rubripes</i>	9	9	9		16	16	0
Mottled duck	<i>Anas p. fulvigula</i>	0	0	0		1	1	0
Mexican duck	<i>Anas p. diazi</i>	0	0	0		0	0	0
Bronze-winged (Spectacled) duck	<i>Anas specularis</i>	5	5	0		9	9	0
Pink-eared duck	<i>Malacorhynchus membranaceus</i>	0	1	0		6	6	0
Marbled teal	<i>Marmaronetta angustirostris</i>	69	63	12		66	66	8
<u>Aythini (Pochards)</u>								
Canvasback	<i>Aythya valisineria</i>	38	37	4		69	69	0
Redhead pochard	<i>Aythya americana</i>	89	93	24		94	96	0
Common pochard	<i>Aythya ferina</i>	0	0	0		2	2	0
White-eye pochard	<i>Aythya australis</i>	1	3	0		3	3	0
Madagascan pochard	<i>Aythya innotata</i>	0	0	0		0	0	0
Baer's pochard	<i>Aythya baeri</i>	3	4	0		10	10	0
Ferruginous pochard	<i>Aythya nyroca</i>	28	10	12		22	18	0
New Zealand scaup	<i>Aythya novaeseelandiae</i>	1	2	0		2	2	0
Ring-necked duck	<i>Aythya collaris</i>	8	5	0		20	17	0
Tufted duck	<i>Aythya fuligula</i>	8	7	0		20	21	0
Greater scaup	<i>Aythya marila</i>	2	3	0		5	5	0
Lesser scaup	<i>Aythya affinis</i>	12	9	0		21	21	0

Common Name	Taxonomic Name	Sex ratio of specimens currently in collection (e.g., 2.2.1)				Sex ratio of specimens that you plan to have in collection in three years?		
<u>Broad-billed Pochards</u>								
Southern pochard	<i>Netta erythrophthalma</i>	5	4	0		5	6	0
Rosy-billed pochard	<i>Netta peposaca</i>	78	59	6		71	76	0
Red-crested pochard	<i>Netta rufina</i>	50	40	1		80	75	1
<u>Mergini (Sea Ducks)</u>								
Common eider	<i>Somateria mollissima</i>	3	4	0		5	6	0
Northern eider	<i>Somateria m. borealis</i>	0	0	0		0	0	0
American	<i>Somateria m. dresseri</i>	2	0	0		6	6	0
European	<i>Somateria m. mollissima</i>	0	0	0		0	0	0
Pacific	<i>Somateria m. v-nigra</i>	1	1	0		2	2	0
King eider	<i>Somateria spectabilis</i>	5	4	0		5	5	0
Spectacled eider	<i>Somateria fischeri</i>	12	10	1		24	21	0
Steller's eider	<i>Polysticta stelleri</i>	0	0	0		0	0	0
Harlequin duck	<i>Histrionicus histrionicus</i>	12	16	0		29	30	0
Long-tailed (Oldsquaw) duck	<i>Clangula hyemalis</i>	6	6	0		12	13	0
Black scoter	<i>Melanitta nigra</i>	0	0	0		0	0	0
American Black scoter	<i>Melanitta n. americana</i>	0	1	0		4	4	0
Surf scoter	<i>Melanitta perspicillata</i>	0	0	0		15	15	0
White-winged scoter	<i>Melanitta fusca</i>	5	4	0		7	7	0
Buffle-head	<i>Bucephala albeola</i>	19	25	0		60	62	0
Barrow's golden-eye	<i>Bucephala islandica</i>	18	17	8		27	29	0
Common golden-eye	<i>Bucephala clangula</i>	7	8	0		15	16	2
American golden-eye	<i>Bucephala c. americana</i>	5	7	0		17	17	0
European golden-eye	<i>Bucephala c. clangula</i>	0	0	0		0	0	0
Hooded merganser	<i>Mergus cucullatus</i>	147	167	15		212	215	11
Smew	<i>Mergellus albellus</i>	22	27	1		38	39	0
Brazilian merganser	<i>Mergus octosetaceus</i>	0	0	0		0	0	0

Common Name	Taxonomic Name	Sex ratio of specimens currently in collection (e.g., 2.2.1)			Sex ratio of specimens that you plan to have in collection in three years?		
Red-breasted merganser	<i>Mergus serrator</i>	8	8	0	30	30	0
Scaly-sided merganser	<i>Mergus squa,atus</i>	2	2	0	10	10	0
Common merganser	<i>Mergus merganser</i>	0	1	0	4	5	0
American merganser	<i>Mergus m. americanus</i>	1	3	0	11	13	0
European merganser	<i>Mergus m. merganser</i>	1	0	0	1	1	0
<u>Oxyurini (Stiff-tailed Ducks)</u>							
Black-headed	<i>Heteronetta atricapilla</i>	0	0	0	0	0	0
Masked duck	<i>Oxyura domincus</i>	3	3	0	3	3	0
Ruddy duck	<i>Oxyura jamaicensis</i>	37	28	7	48	46	0
N. American ruddy duck	<i>Oxyura j. jamaicensis</i>	140	131	33	164	170	10
Peruvian ruddy duck	<i>Oxyura j. ferruginea</i>	0	0	0	0	0	0
White-headed	<i>Oxyura leucocephala</i>	6	7	0	15	15	0
Maccoa duck	<i>Oxyura maccoa</i>	0	1	0	1	1	0
Argentine blue-billed duck	<i>Oxyura vitata</i>	3	5	0	4	4	0
Australian blue-billed duck	<i>Oxyura australis</i>	0	0	0	0	0	0
Musk duck	<i>Biziura lobata</i>	0	0	0	0	0	0
	Grand totals by gender	3045	2965	636	4295	4309	376
	Grand Total specimens	6646		8980			
Screamers		42	33	3	43	41	5
	<i>Group counts</i>	78		89			
Tribe: Anseranatini		22	26	2	22	28	0
Magpie Goose							

Common Name	Taxonomic Name	Sex ratio of specimens currently in collection (e.g., 2.2.1)			Sex ratio of specimens that you plan to have in collection in three years?		
	<i>Group counts</i>	50		50			
Tribe: Dendrocygnini Whistling or Tree Ducks		325	359	152	545	556	128
	<i>Group counts</i>	836		1229			
Tribe: Anserini Swans & True Geese		362	424	160	442	512	131
	<i>Group counts</i>	946		1085			
Tribe: Cereopsini Cape Barren Goose		6	9	0	12	16	0
	<i>Group counts</i>	15		28			
Tribe: Stictonettini Freckled Duck		0	0	0	2	2	0
	<i>Group counts</i>	0		4			
Tribe: Tadornini Sheldgeese & shelducks		185	211	63	243	249	31
	<i>Group counts</i>	459		523			
Tribe: Tachyerini Steamer Ducks		2	4	0	11	11	0

Common Name	Taxonomic Name	Sex ratio of specimens currently in collection (e.g., 2.2.1)			Sex ratio of specimens that you plan to have in collection in three years?		
	<i>Group counts</i>	6		22			
Tribe: Cairinini Perching Ducks		624	505	41	675	614	8
	<i>Group counts</i>	1170		1297			
Tribe: Merganettini Torrent Duck		0	0	0	4	4	0
	<i>Group counts</i>	0		8			
Tribe: Anatini Dabbling Ducks		689	632	103	1103	1070	49
	<i>Group counts</i>	1424		2222			
Tribe: Aythyini Pochards		323	276	47	424	421	1
	<i>Group counts</i>	646		846			
Tribe: Mergini Sea Ducks		276	311	25	534	546	13
	<i>Group counts</i>	612		1093			
Tribe: Oxyurini Stiff-tailed Ducks		189	175	40	235	239	10

Common Name	Taxonomic Name	Sex ratio of specimens currently in collection (e.g., 2.2.1)			Sex ratio of specimens that you plan to have in collection in three years?		
	<i>Group counts</i>	404		484			
		3045	2965	636	4295	4309	376
	GRAND TOTALS	6646		8980			

Useful Listservs

Waterfowl@lists.aza.org – This listserv is open to anyone interested in managing waterfowl, available for various communications regarding TAG business or waterfowl husbandry and management.

wwdssp@lists.aza.org – This listserv is dedicated to the White-winged Wood Duck Species Survival Plan, and is open to anyone interested in White-winged wood ducks.



Figure 31: Northern Shovelers (USFWS)