

*Wisconsin's Trumpeter Swan Recovery
Program: A 30-Year Retrospective (1987-
2017) on Research, Management, and
Collaboration*

Sumner Matteson, Patricia Manthey,
Michael Mossman, Lisa Hartman, Randle
Jurewicz, and Ed Diebold

Co-Author Recognition

Patricia Manthey



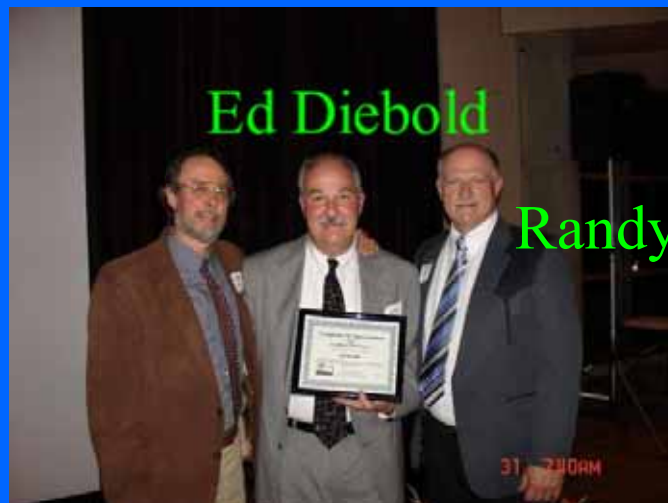
Michael Mossman



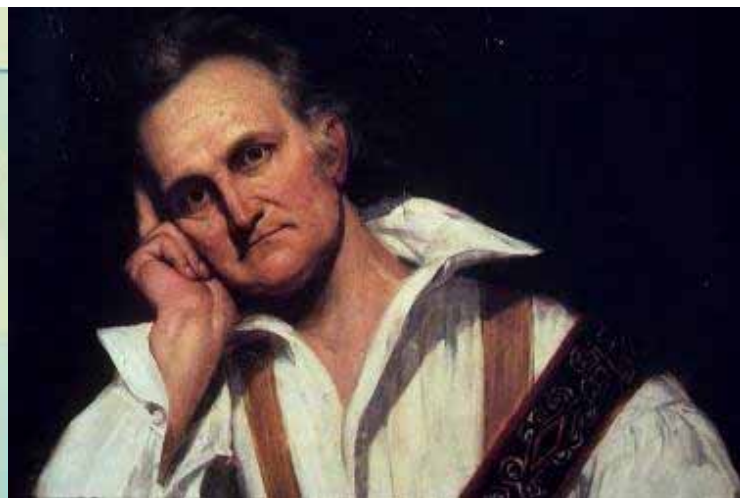
Lisa Hartman



Ed Diebold



Randy Jurewicz



FATHER JACQUES MARQUETTE, 10-25 JUNE 1673

*IN The Jesuit Relations and Allied Documents, Travels and Explorations of the
Jesuit Missionaries in North America (1610-1791).*

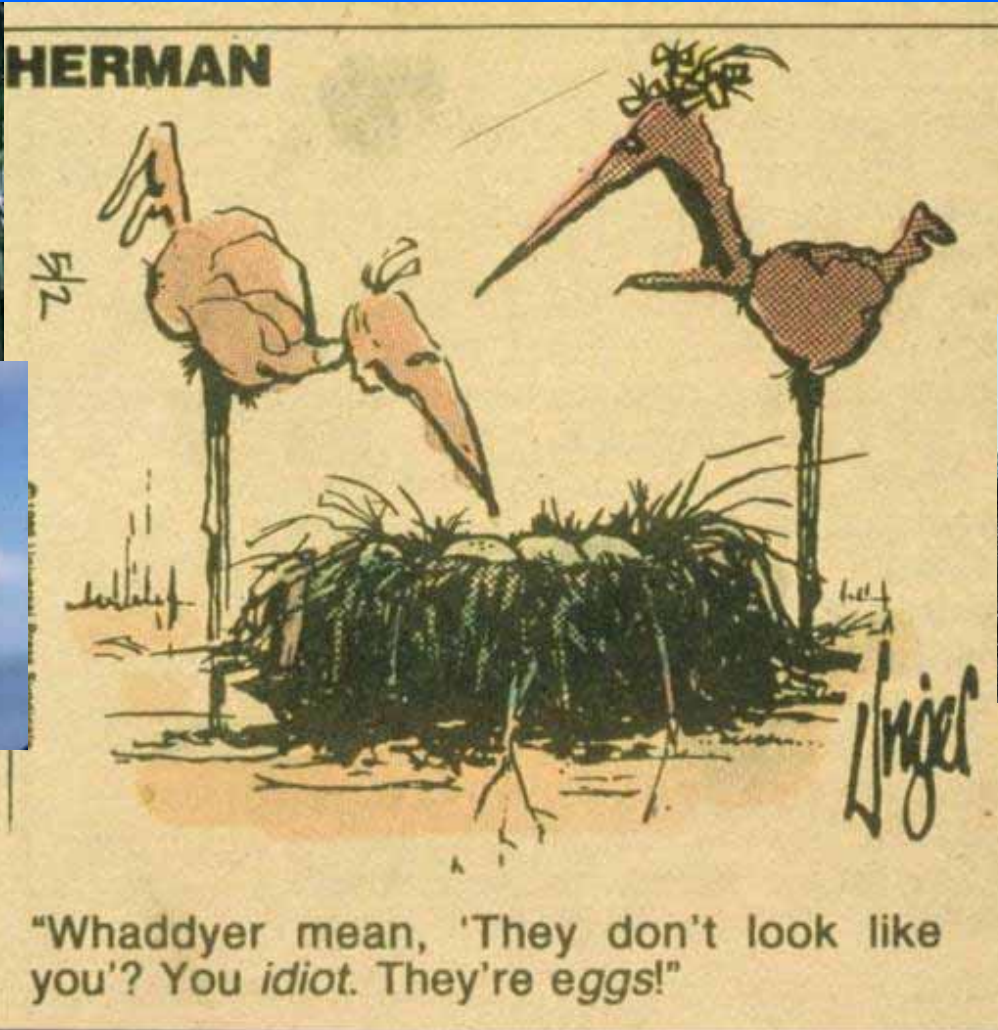
“... The River on which we embarked is called Meskousing [Wisconsin]. It is very wide; it has a sandy bottom, which forms various shoals that render its navigation very difficult.... We safely entered [the] Mississippi on the 17th of June, with a Joy that I cannot Express.... Its Width is very unequal; sometimes it is three-quarters of a league [mile], and sometimes it narrows to three arpents [acres]. We gently followed its course, which runs toward the south and southeast, as far as the 42nd degree of Latitude [NW IL].... **We saw only deer and cattle [bison] ... and Swans without wings, because they drop Their plumage in This country.**”

WISCONSIN TRUMPETER SWAN PROGRAM



*RECOVERY GOAL: 20 BREEDING
AND MIGRATORY PAIRS BY THE
YEAR 2000* (Matteson *et al.* 1986)

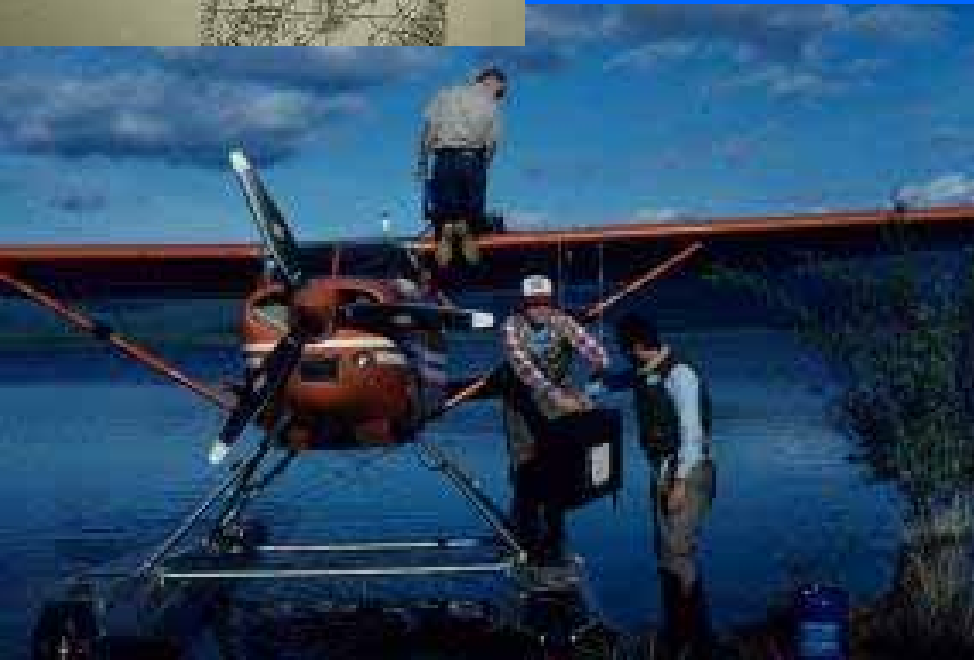
Cross-fostering: 1987 -1988, SE WI
Dick Hunt, Dave Matheys, Becky Abel, Mike Mossman



Alaskan Trumpeter Swan Egg Collection, 1989-1997
Mary and Terry Kohler, Windway Capital Corporation



Alaskan Trumpeter Swan Egg Collection, 1989-1997

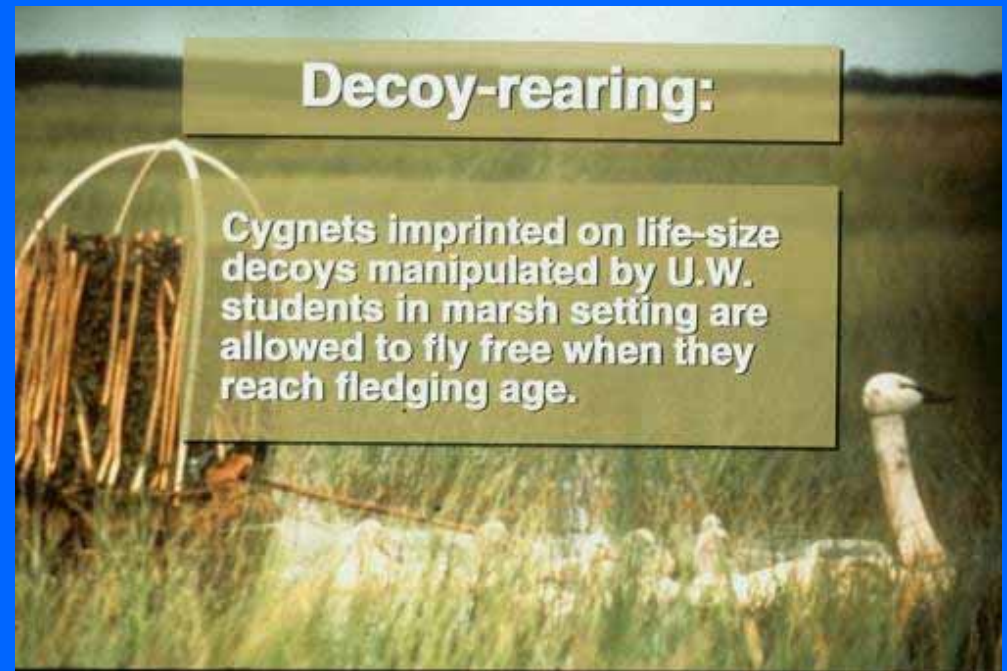


Hatching Success at Milwaukee County Zoo, Ed Diebold and Veterinary Staff



YEAR	LOCATION	#COLL.	#HATCHED	MEAN WT. (g)
1989	Minto Flats	37	35 (95%)	234.1
1990	Nelchina B.	40	39 (98%)	233.4
1991	Nelchina B.	40	33 (83%)	227.1
1992	Minto Flats	28	27 (96%)	230.7
1993	Nelchina B.	50	46 (92%)	236.7
1994	Minto Flats	50	47 (94%)	242.8
1995	Nelchina B.	50	46 (92%)	221.2
1996	Nelchina B.	45	43 (96%)	228.6
1997	Minto Flats	45	40 (89%)	-
TOTAL:		385	356 (93%)	231.8

WI Trumpeter Swan Decoy-rearing Program



WI Trumpeter Swan Captive-rearing Program



WI Trumpeter Swan Captive Parent-rearing Program

Below: Swan Family, BP Amoco, Naperville, IL



Criteria For Selection Of Release Sites



- Minimal Or No Waterfowl Hunting
- Abundant, Diverse Submerged/Emergent Aquatic Plant Foods (e.g. *Elodea*, *Sagittaria*, *Najas*, *Nitella*, *Potamogeton*, *Sparganium*)
- Minimal Uncontrolled Human Use
- Presence Of Emergent Or Shrubby Escape Cover
- Absence Of Power Lines
- Abundant, Diverse Wetlands Within 10 miles Of Release Site
- Additionally, Decoy-rearing Required Sites With Controlled Access, Proximity To WI DNR Or USFWS Maintenance Facilities, Appropriate Water Depth (1-3 ft) For Working In Float Tubes, And Presence Of Islands Or Dikes Appropriate For Overnight Cages.



Trumpeter Swans Released In WI 1989-2005



**DECOY-
REARING**

**CAPTIVE-
REARING**

**CAPTIVE
P.-REAR.**

**CAPTIVE-
REAR. Y.**

**MISC.
ORIGIN**

TOTAL

**196
(49.7%)**

**159
(40.4%)**

**32
(8.1%)**

**6
(1.5%)**

**1
(0.3%)**

**394
(100%)**





Monitoring WI TRUS Restoration Flock

- Spring Aerial Survey To Locate Nests
- Ground-truthing To Determine Clutch Size
- August Flight To Locate Families And Count Cygnets
- Aug-Sep Swan (Mostly Cygnets) Round-ups, With Pilots Circling Overhead And Directing Kayaks/Canoes, Followed By: 1) Marking Birds With FWS Leg Bands and Neck Collars; 2) Health Sampling—5-6 cc Blood/Bird For Lead Poisoning and Diseases, DNA Sexing; 3) Weighing Each Bird
- 1 Fall Flight (Late Sep/Early Oct) To Determine Production

21 Aug 2012, MBB Cranb. Flowage, Wood Co.



Weighing Swans



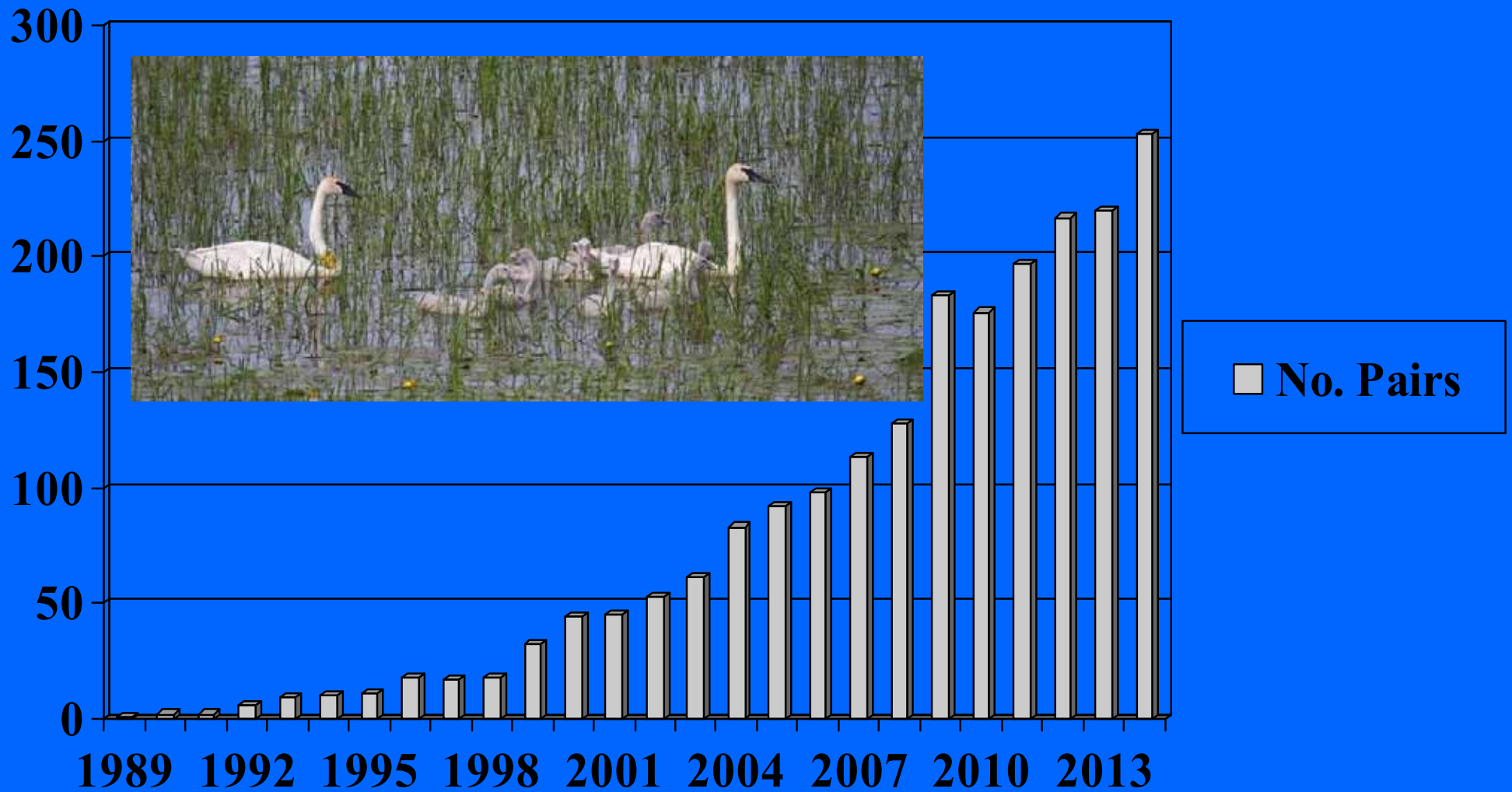
Release, Yellow River Cranberry Marsh, 21 Aug 2012



Final Round-up Group Photo, Jenny Lake, Wood County
22 Aug 2012



WI Trumpeter Swan Nesting Pairs, 1989-2014



Distribution Of 253 Trumpeter Swan Nests By Ecological Landscape, 2014

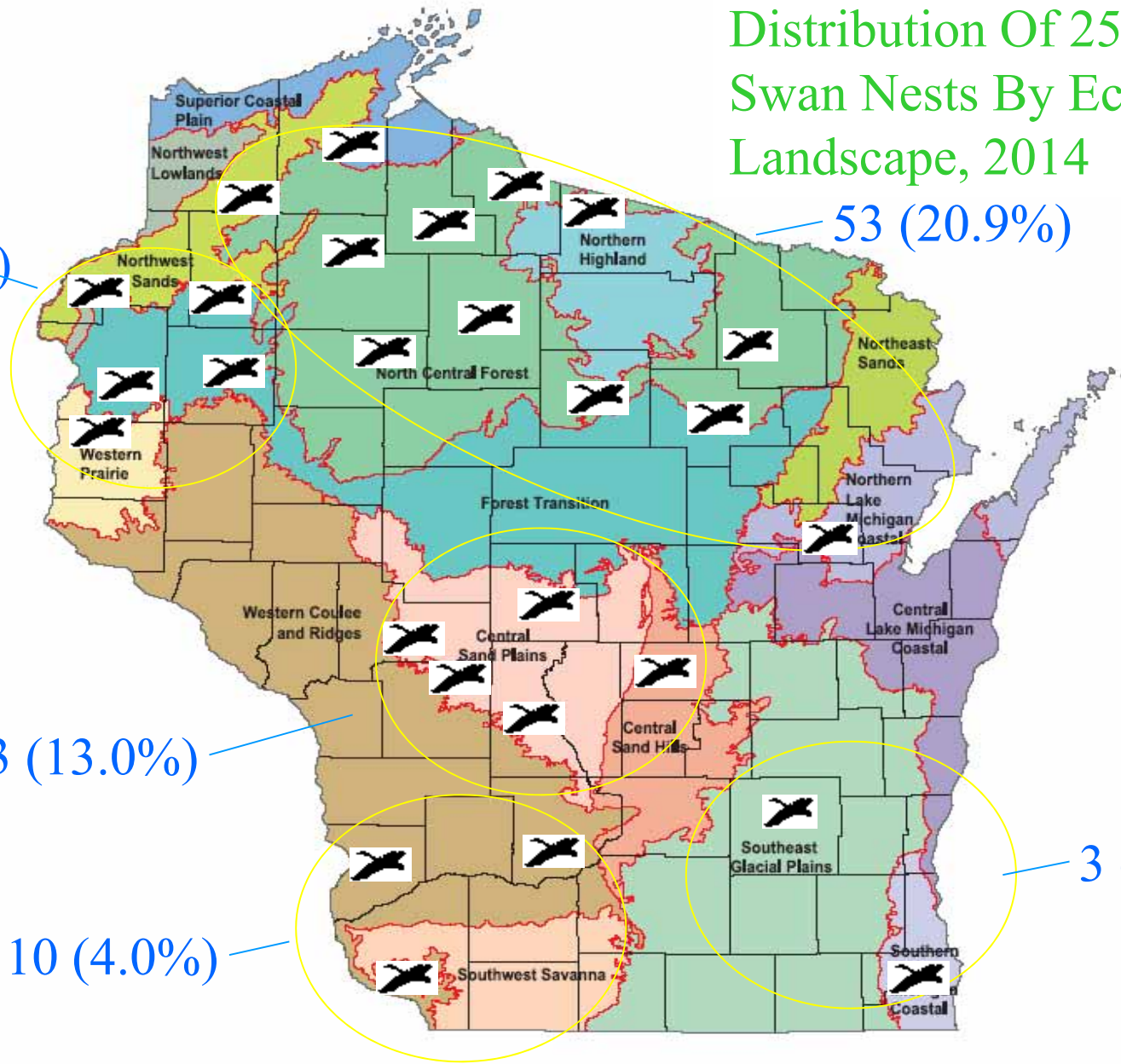
154 (60.9%)

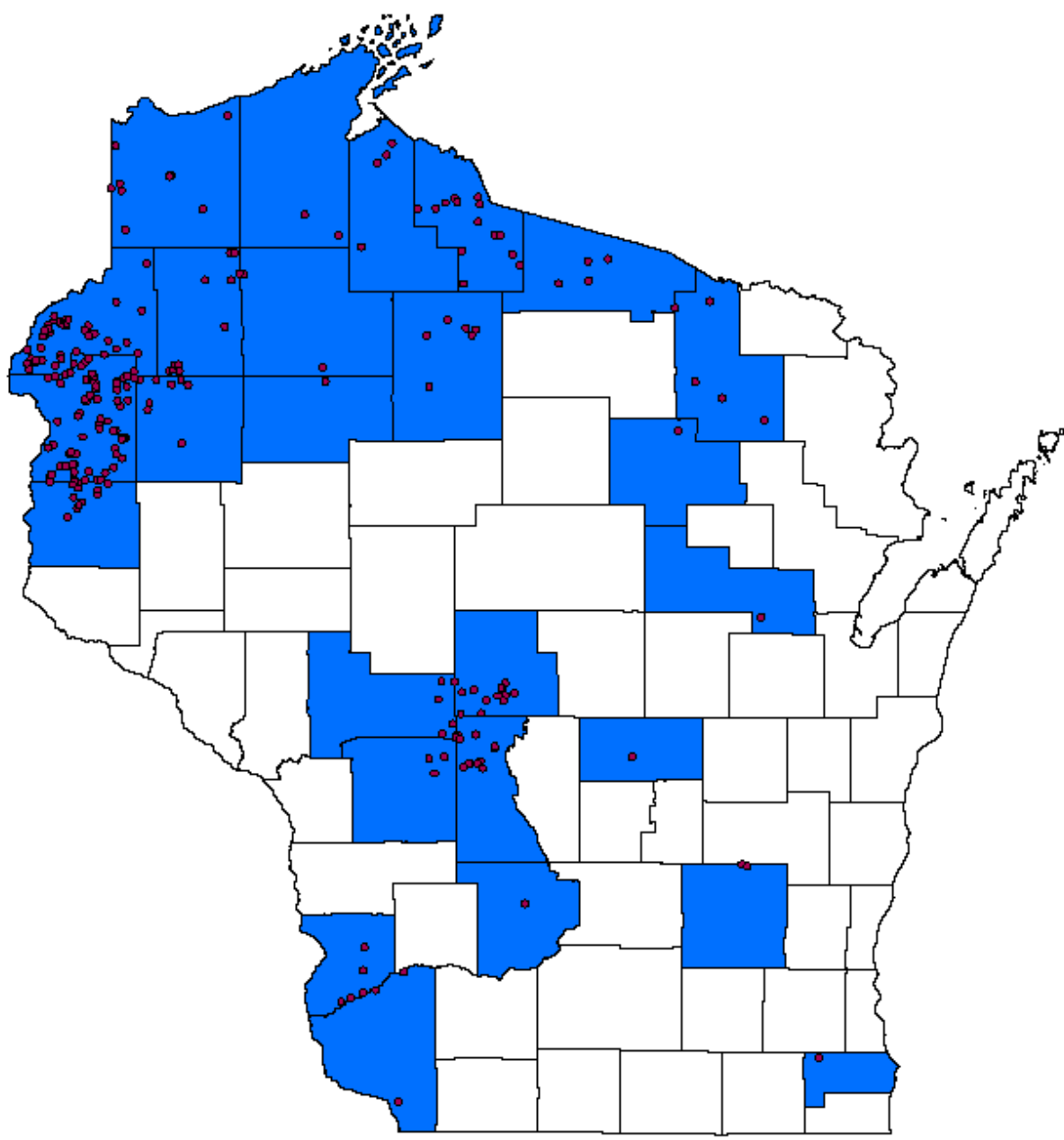
53 (20.9%)

33 (13.0%)

10 (4.0%)

3 (1.2%)





Wisconsin Trumpeter Swan Breeding Habitat Characteristics

- Shallow (generally 1-2 m deep or less) WPAs, Cranberry Impoundments/Flowages, With Sedge And Cattail Marshes.
- Shallow State WLA Flowages, Marshes, Small Farm Ponds (<2 ac, 1 ha), Glacial Potholes, With Abundant Submergents And Emergents (*Elodea*, *Sagittaria*, *Najas*, *Nitella*, *Potamogeton*, *Sparganium*, *Zizania*).
- Several WPAs, WLAs Dominated By Wild Rice Or Cattail/Sedges.
- Backwater Sloughs, Beaver Ponds, Bogs, Hardwood Swamps With Small Marshy Islands/Islets And Abundant Submergent Foods (*Elodea*, *Potamogeton* spp., etc.).
- Lake Bay Marshes And Lake Edge Marshes.
- Nests Often Constructed On Small Islands/Islets Or Built-up Mounds Of Detritus And *Typha*, *Zizania*, or *Scirpus*.





Migration And Wintering



- Collars With Alpha-Numeric Codes Allow Regional Reporting
- Tracked 16 Swans Equipped With Satellite Transmitters During Fall 1999-Spring 2001 (Riverbanks Zoo, Bronx Zoo, Mil. Co. Zoo, Wildl. Preserv. Trust Intl., Wildl. Conserv. Solutions, WDNR)
- Shortest Migration: 41 Miles – Hudson Area
- Longest Migration: 607 Miles – Union Co. WLA, SW IL

Wintering Habitats Generally Similar To Br. Habitats.

Example: Br.: Cen. WI Diked Pools/Impoundm. On State WLAs And Cran. Lands

Winter: Reclaimed Strip Mines (SW IL) Managed For Waterfowl



Trumpeter Swan Delisted in WI, October 2009



Trumpeter Swan Aerial Surveys, Mid-May 2015













WI TRUS Program: Lessons Learned, 1987-2017

- Identify Clear, Obtainable Research/Management Objectives
- Identify/Implement Funding Strategy Early On; Take Advantage Of Opportunities As They Arise (Partnering w/Milwaukee Ballet Co.)
- Remain Open To New/Different Approaches (Decoy-Rearing; Release Of Swans On Bad River Indian Reservation)
- Recruit/Build Upon Partnerships (>700)
- Celebrate Successes With Partners, Learn From Failures/Disappointments
- Persist; Visualize Reaching Goal

MAJOR WI TRUMPETER SWAN PROGRAM PARTNERS

- WDNR: BUREAUS OF SS, WM, ER; MNDNR; MIDNR
- U.S. FISH AND WILDL. SERV.; THE TRUMPETER SWAN SOC.
- NATURAL RESOUR. FND. OF WI, INC.
- MIL. CO. ZOO; ZOOL. SOC. OF MIL. CO.
- UNIVERSITY OF WI-MADISON, DEP. WILDL. ECOL.
- GENERAL ELECTRIC MEDICAL SYSTEMS
- WINDWAY CAPITAL CORPORATION; ICF; FOC
- SOCIETY FOR TYMPANUCHUS CUPIDO PINNATUS
- BP NAPERVILLE RESEARCH CENTER; WSO
- BAD RIVER TRIBE OF THE LAKE SUPERIOR CHIP.
- GOTTSCHALK CRANBERRY GROWERS; OCEAN SPRAY, INC.
- RIVERBANKS ZOO AND GARDENS; WILDL. CONS. SOL./BRONX ZOO ; WCC
- RIPPLES, INC.; BROGAN FOUNDATION; JOHNSON'S WAX; JOHNSON FAMILY FOUNDATION; FRIENDS OF CREX; BARRY WALLACE & PVT. Citizens Collectively
- MENASHA CORP. FDN; ALEXANDER FND, INC. ; THREE RIVERS PARK DISTRICT (Formerly Hennepin Parks)



*82 K – 26 Year-old TRUS, Collected as Egg (U2) in 1989. Last Obs.
15 August 2015, Wood River, Burnett County , WI, By Kathy Java*

