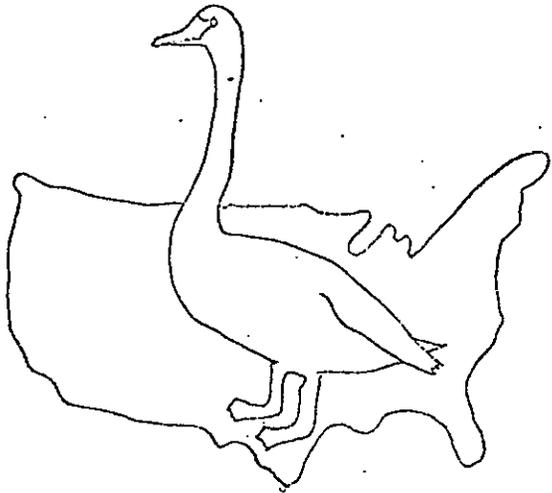


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NATIONAL TRUMPETER SWAN SURVEY  
 (Excluding Alaska)

1968

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BUREAU OF SPORT FISHERIES AND WILDLIFE

REGION I

Coordinated by

RED ROCK LAKES NATIONAL WILDLIFE REFUGE

1968 NATIONAL AERIAL TRUMPETER  
SWAN SURVEY

The Annual Trumpeter Swan Census was held this year on the 26, 27, and 28th of August. In 1967 it was decided that this time of the year offered the best of a compromise situation. September weather is always quite unpredictable and yet the census should be conducted as late in the year as possible to count the maximum number of cygnets which will reach flight stage. The weather for the three days of flying required was good and only on the first day was the wind a bit gusty in the afternoon. Visibility was excellent on all three days.

On the first day the Red Rock Lakes Refuge and the rest of the Centennial Valley was censused. Robert Twist was the pilot of the aircraft and John Annear acted as the observer. Within the refuge a total of 245 trumpeter swans were counted. This is not an outstanding amount, ranking only as the 13th highest total ever recorded for the refuge. The cygnet count on the refuge was 90. This is the second highest number of cygnets censused within the refuge, being exceeded only by the 122 counted in 1963. The remainder of the Centennial Valley yielded 103 swans, of this total 24 were cygnets, which to this writer's knowledge, is the largest total of cygnets ever produced in the off-refuge portion of the valley. Also on this first day Ray Glahn censused the Ennis Lake area and the Madison River drainage including the upper reaches of Hebgen Lake.

The second day's flight covered Yellowstone National Park. Twist again acted as the pilot while Glahn, Annear, and Bill Dunsmire, Chief Naturalist of the Park acted as observers. Within Yellowstone Park 61 trumpeters were sighted. This total was made up of 57 adults and 4 cygnets. This is very similar to the number of birds counted in 1967, when 55 adults and 2 cygnets were censused. It has been suggested that one reason for the low production figures of the past two years might be due to the heavy public use that this area receives. The paradoxical thing about this situation is the fact that five of the cygnets sighted were in the areas of heaviest public use. One was located in a small pond along-side the road near Junction Butte and four were located on the river near the Madison River Junction, probably as busy a spot as any within the park. Another note of interest was the sixth cygnet that was observed. This bird was located in the extreme southeastern corner of the park. On the first flight over the park it appeared as though there were two swans and a snow goose. Five subsequent passes over this trio of birds were required to satisfy all of the observers that what we were seeing was an albino trumpeter swan cygnet. It was the size of a snow goose and pure white, but close aerial examinations revealed that it had the typical configuration of a swan cygnet. And it was the unanimous opinion of the four observers that it was indeed an albino trumpeter. Another flight just prior to freeze-up is planned for that area to determine if the youngster survived long enough to take wing.

Later in the second day, with Glahn acting as pilot and Annear as observer Henry's Lake and Conklin Lake were surveyed, resulting in the sighting of two pairs on the former and one pair on the later.

Day three of the Annual Trumpeter Swan Census saw the group heading out for the Jackson Hole country. Twist was again flying the aircraft while Glahn, Annear, and Willard Dilley, Chief Naturalist of the Grand Teton National Park acted as observers. Within the Grand Teton Park the production was the best it has been for many years. Over the past years the production has been averaging four or five cygnets per year, but this year 14 young birds were counted in this area. The total birds counted in the Jackson Hole area was about the same as has been counted over the past six years. The total count for the Wyoming area was 126 birds, with 25 of these being cygnets.

In the afternoon of the third day the census aircraft proceeded to the Idaho portion of the annual census. Piloting was Twist and observing were Glahn and Annear. The total number of birds sighted was 94, one less than in 1967 and this total can be broken down into 88 adults and 6 cygnets. This is the lowest number of cygnets sighted in the Idaho area for many years and compares quite unfavorable with 32 cygnets in 1963 and 21 in 1966.

Total counts for 1968 as compared to 1967 and 1966 shows the following:

<u>Year</u>	<u>Adult</u>	<u>Cygnets</u>	<u>Total</u>
1966	713	165	878
1967	701	93	794
1968	684	206	890

It will be noted that the 1968 total is the highest total number of trumpeter swans ever counted in those areas covered by this census. The previous high was in 1966 when 878 swans were tallied. All of this increase can easily be accounted for by the tremendous increase in the cygnet production of 1968, 206 as compared to only 93 in 1967. 1968 was the second highest production year being exceeded only by 1963 when a total of 227 cygnets were raised. It can be seen that the Red Rock Lakes Refuge produced nearly as many cygnets in 1968 (90) as the whole census area produced the previous year (93).

It will be remembered that in 1966 a total of 878 swans were counted yet in 1967, only 701 of these could be accounted for. In the same vein it can be noted that of the 794 birds tallied in 1967, only 684 could be accounted for in 1968; a loss of 110 swans. And the answers to this situation are no nearer forthcoming than in any previous years. Checking back over past census records reveals that the greatest loss has occurred within the area of the Centennial Valley. Most of the other census areas are remaining relatively stable or are displaying a slight increase in population.

For the third straight year no trumpeters have been sighted on Hebgen

Lake. Apparently this is a direct result of increased number of summer homes and the accompanying use of the lake for boating and waterskiing activities.

As of the writing of this report we have placed display birds into 53 different zoos. Five of these zoos are outside the United States. Nine cygnets were produced in the zoos this year. This compares with ten produced in 1967. Five of these cygnets were produced in the Tracy Avairy in Salt Lake and the other four were raised in the zoo in Great Bend, Kansas.

The information regarding the captive birds in zoos and parks was obtained through correspondence, as was the population data regarding swans on the National Wildlife Refuges not included in the tri-state portion of the survey.

A vote of thanks to all correspondents and a special added appreciation to those who participated in the aerial survey.

Ray Glahn, Pilot-biologist, BSW  
Robert Twist, Refuge Manager, Camas NW Refuge  
Willard Dilley, Chief Naturalist, Grand Teton Nat'l.  
Park  
Bill Dunsmire, Chief Naturalist, Yellowstone Nat'l.  
Park

Submitted by: \_\_\_\_\_  
John T. Annear, Biologist

Date: \_\_\_\_\_

Approved by: *Owen H. Vivion*  
Owen H. Vivion, Refuge Manager

Date: 10/3/68

1968 NATIONAL AERIAL TRUMPETER SWAN SURVEY

<u>Location</u>	<u>Groups</u>	<u>Ad.-Cyg. Ratio</u>	<u>Totals</u>
<u>MONTANA</u>			
<u>Red Rock Lakes Refuge</u>			
Upper Lake	26-0, 14-0, 3-0, 2-0, 2-4, 2-2, 2-0, 2-0	53-6	59
Swan Lake	2-6, 2-2, 2-3, 2-1, 2-4, 2-0, 2-0, 2-0, 2-0, 2-0, 2-0	22-16	38
River Marsh	2-0, 1-0, 1-0, 2-4, 1-0, 2-3, 2-2, 2-4, 2-0, 2-5, 2-3, 2-5, 2-3, 2-1, 2-2, 2-1, 2-0, 2-0, 2-4, 2-0	37-37	74
Lower Lake	2-0, 1-0, 2-4, 2-1, 2-0, 2-0, 2-0, 2-1, 1-0, 1-0, 2-1, 2-2, 2-3, 2-5, 2-4	29-24	53
Elk Springs	2-0	2-0	2
Widgeon Pond	2-3	2-3	5
Sora Pond	2-3	2-3	5
Shamow Pond	4-0	4-0	4
Pintail Ditch	2-1, 2-0	<u>4-1</u>	<u>5</u>
	Refuge Totals	155-90	245
<u>Centennial Valley (Outside Refuge)</u>			
Red Rock River	2-0, 2-0, 2-0, 2-0, 2-0, 2-3, 2-3, 2-0, 2-0, 2-0, 1-0, 2-0, 2-0, 2-0, 5-0, 2-0, 2-0, 2-0, 2-0,	40-6	46
Lima Reservoir	5-0, 2-0, 2-0, 2-0, 2-0, 2-0, 2-0, 2-0, 2-2	21-2	23
Blake Slough	2-1, 2-2	4-3	7
Jones Pothole	2-0	2-0	2
Breneman's Pothole	2-3, 2-0, 2-0	6-3	9

<u>Location</u>	<u>Groups</u>	<u>Ad.-Cyg. Ratio</u>	<u>Totals</u>
<u>Centennial Valley (Outside Refuge) Cont.</u>			
Beans Pothole	2-2	2-2	4
Doyle School Pond	2-5	2-5	7
Blake Lane Pond	2-3	<u>2-3</u>	<u>5</u>
	Totals	79-24	103
<u>Beaverhead National Forest</u>			
Elk Lake	2-5	2-5	7
Conklin Lake	2-0	2-0	2
<u>Other Areas</u>			
Bar N Ranch (West Yellowstone)	2-4	2-4	6
Ennis Lake	2-0	<u>2-0</u>	<u>2</u>
	Totals	8-9	17
	MONTANA TOTALS	242-123	365

IDAHO

Putney & Squirrel  
Meadows and  
Adjacent Areas

2-0, 2-0, 2-0, 2-0, 4-0,  
1-0, 2-1, 2-0, 2-0, 2-0,  
1-0, 2-0, 2-1

26-2

28

Island Park Area

Henry's Lake	2-0, 2-0	4-0	4
Sheridan Res.	2-0, 2-0, 2-0	6-0	6
Pond 4 mi. NW of Island Park Res.	2-0, 1-0	3-0	3
Island Park Res.	28-0, 5-0, 2-1, 2-0	37-1	38
Gold Lake	2-1	2-1	3
Silver Lake	2-0, 2-0, 2-2	6-2	8

<u>Location</u>	<u>Groups</u>	<u>Ad.-Cyg. Ratio</u>	<u>Totals</u>
<u>IDAHO, Cont.</u>			
<u>Island Park Area, Cont.</u>			
Mack's Inn	2-0	2-0	2
Snake River	2-0	<u>2-0</u>	<u>2</u>
	Totals	62-4	66
	IDAHO TOTALS	88-6	94

WYOMING

Yellowstone Nat'l. Park

Junction Butte Ponds	2-1	2-1	3
Slough Creek	2-0	2-0	2
Fern Lake	2-0	2-0	2
Tern Lake	2-0, 2-0, 1-0	5-0	5
Yellowstone River. N Fishing Bridge	2-0, 2-0, 1-0	5-0	5
Squaw Lake	2-0	2-0	2
Yellowstone River. Delta SE Arm	2-0, 2-0	4-0	4
Yellowstone River. Thorofare Area	2-1	2-1	3
Bridger Lake	2-0	2-0	2
Trail Lake	2-0, 1-0	3-0	3
SE Arm	2-0	2-0	2
South Arm	3-0, 2-0, 1-0	6-0	6
Delusion Lake Pond	2-0	2-0	2
Riddle Lake	2-0	2-0	2
Heart Lake	1-0	1-0	1

<u>Location</u>	<u>Groups</u>	<u>Ad.-Cyg. Ratio</u>	<u>Totals</u>
<u>WYOMING, Cont.</u>			
<u>Yellowstone Nat'l. Park, Cont.</u>			
Harlequin Lake	2-0	2-0	2
Madison River	2-2	2-2	4
Hayden Valley	7-0, 2-0	9-0	9
Ice Lake	2-0	2-0	2
	Yellowstone Park Totals	57-4	61
<u>National Elk Refuge</u>			
Flat Creek	2-2, 1-0	3-2	5
<u>Grand Teton Park</u>			
Christian Pond	2-0	2-0	2
Elk Ranch Res.	2-0	2-0	2
Buffalo River	2-3	2-3	5
Jackson Lake	3-0, 3-0, 2-0	8-0	8
Two Ocean Lake	3-0, 1-0	4-0	4
Two Ocean Lake Pond	1-0	1-0	1
Pothole W of Emma Matilda Lake	2-4	2-4	6
Swan Lake	2-4	2-4	6
Lewis River	2-0, 2-0	4-0	4
Sawmill Pond	2-3	2-3	5
	Grand Teton Totals	29-11	43
<u>Teton National Forest</u>			
Enos Lake	2-2	2-2	4

<u>Location</u>	<u>Groups</u>	<u>Ad.-Cyg. Ratio</u>	<u>Totals</u>
<u>WYOMING, Cont.</u>			
<u>Targhee National Forest</u>			
Jackass Meadow	2-0, 2-2, 2-1, 2-0, 2-0	<u>10-3</u>	<u>13</u>
WYOMINGS TOTALS		101-25	126

The following Trumpeter Swan populations are located on National Wildlife Refuges not included in the aerial census. Information on numbers and production in these populations was obtained from the refuge managers.

<u>Location</u>	<u>Adult-Cygnets Ratio</u>	<u>Total</u>
<u>MINNESOTA</u>		
Sherburne NW Refuge	2-0	2
<u>NEVADA</u>		
Ruby Lake NW Refuge	24-10	34
<u>OREGON</u>		
Malheur	40-11	51
<u>SOUTH DAKOTA</u>		
Lacreek NW Refuge	55-21	76
<u>WASHINGTON</u>		
Turnbull NW Refuge	<u>36-1</u>	<u>37</u>
REFUGE TOTALS		200

An attempt is presently being made to reestablish a breeding flock in Minnesota. During the autumn of 1967 and summer of 1968 adults and cygnets were shipped to the Hennepin County Park Reserve District.

<u>MINNESOTA</u>		
Hennepin County	11-17	28

TRUMPETER SWAN IN CAPTIVITY

<u>Area</u>	<u>Adults</u>	<u>Cygnets</u>	<u>Total</u>
Washington, D.C.	2		2
Alabama, Birmingham	2		2
California, Fresno	2		2
California, San Diego	2		2
California, San Francisco	2		2
Colorado, Colorado Springs	2		2
Colorado, Denver	2		2
Florida, Miami	2		2
Florida, Naples	2		2
Florida, Tampa	2		2
Georgia, Albany	2		2
Idaho Falls, Idaho	2		2
Illinois, Brookfield	2		2
Illinois, Chicago	1		1
Indiana, Evensville	2		2
Kansas, Great Bend	2	4	6
Kansas, Topeka	2		2
Maryland, Baltimore	2		2
Maryland, Wheaton	3		3
Massachusetts, Boston	2		2
Michigan, Augusta	2		2
Michigan, Royal Oaks	2		2
Minnesota, Minneapolis	2		2
Minnesota, St. Paul	2		2
Mississippi, Jackson	2		2
Missouri, St. Louis (female killed)	1		1
Nebraska, Lincoln	2		2
New York, Bronx	2		2
New York, Buffalo	1		1
New York, Ithaca (male escaped)	1		1
Ohio, Cleveland	2		2
Ohio, Oak Harbor	2		2
Ohio, Powell	3		3
Oklahoma, Oklahoma City	2		2
Oklahoma, Tulsa (both died)	0		0
Pennsylvania, Philadelphia	3		3
South Dakota, Watertown	2		2
Tennessee, Memphis	2		2
Texas, Dallas	2		2
Texas, Fort Worth	2		2
Texas, Houston	2		2
Texas, San Antonio	2		2
Texas, Victoria	2		2
Utah, Salt Lake City	3	5	8
Washington, Seattle	2		2
Virginia, Richmond	2		2
Nova Scotia, Schubenacadie	2		2
Germany, Berlin	1		1
Belgium, Antwerp	2		2
France, Seine	2		2
<b>TOTALS</b>	<b>98</b>	<b>9</b>	<b>107</b>

COMPARISON TOTALS 1966-1967-1968

	<u>Adult-Cygnets</u>			<u>Totals</u>		
	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
<u>MONTANA</u>						
Red Rock Lakes Refuge	240-54	184-20	155-90	294	204	245
Centennial Valley other than refuge	104-11	113-5	79-24	115	118	103
Beaverhead Nat'l. Forest and other areas	7-1	7-0	8-9	8	7	17
<b>MONTANA TOTALS</b>	<b>351-66</b>	<b>304-25</b>	<b>242-123</b>	<b>417</b>	<b>329</b>	<b>365</b>
<u>IDAHO</u>						
Targhee Nat'l. Forest	21-8	26-3	26-2	29	29	28
Island Park Area	39-13	59-5	62-4	52	64	66
Other Areas	2-0			2		
<b>IDAHO TOTALS</b>	<b>62-21</b>	<b>85-8</b>	<b>88-6</b>	<b>83</b>	<b>95</b>	<b>94</b>
<u>WYOMING</u>						
Yellowstone Nat'l. Park	57-12	55-2	57-4	69	57	61
Nat'l. Elk Refuge	7-4	6-3	3-2	11	9	5
Grand Teton Nat'l. Park	26-4	24-5	29-14	30	29	43
Targhee Nat'l. Forest	9-6	12-2	10-3	15	14	13
Teton Nat'l. Forest	2-2	2-0	2-2	4	2	4
<b>WYOMING TOTALS</b>	<b>101-28</b>	<b>99-12</b>	<b>101-25</b>	<b>129</b>	<b>111</b>	<b>126</b>
<b>NEVADA TOTALS</b>	<b>20-9</b>	<b>26-1</b>	<b>24-10</b>	<b>29</b>	<b>27</b>	<b>34</b>
<b>OREGON TOTALS</b>	<b>32-13</b>	<b>33-12</b>	<b>40-11</b>	<b>45</b>	<b>45</b>	<b>51</b>
<b>SOUTH DAKOTA TOTALS</b>	<b>34-21</b>	<b>34-21</b>	<b>55-21</b>	<b>55</b>	<b>55</b>	<b>76</b>
<b>WASHINGTON TOTALS</b>	<b>36-0*</b>	<b>35-4</b>	<b>36-1</b>	<b>36*</b>	<b>39</b>	<b>37</b>
<b>CAPTIVE SWANS **</b>	<b>77-7</b>	<b>85-10</b>	<b>98-9</b>	<b>84</b>	<b>95</b>	<b>107</b>
<b>GRAND TOTAL OF ALL AREAS CENSUSED</b>	<b>713-165</b>	<b>701-93</b>	<b>684-206</b>	<b>878</b>	<b>796</b>	<b>890</b>

\* Includes 11 cygnets transferred in 1965, and 20 (1 of which died) in 1966.

\*\* Includes 10 Trumpeter Swans outside Continental United States.

Year	Red Rock Lakes NW Refuge			Total - All areas		
	Adult	Cygnets	Total	Adult	Cygnets	Total
1932	19	7	26	57	12	69
1933	15	9	24	49	17	66
1934	16	26	42	48	49	97
1935	30	16	46	46	27	73 *
1936	31	26	57	76	41	117
1937	34	51	85	81	77	158
1938	28	42	70	93	55	148
1939	50	59	109	123	76	199
1940	58	48	106	123	68	191
1941	52	44	96	143	69	212
1942	45	43	88	98	53	151 *
1943	88	25	113	137	34	171 *
1944	106	58	164	207	72	279
1945	113	50	163	180	55	235 *
1946	124	46	170	289	72	361
1947	131	49	180	292	60	352
1948	121	73	194	312	106	418
1949	132	61	193	348	103	451
1950	106	40	146	303	73	376
1951	170	76	246	417	118	535
1952	184	55	239	478	93	571
1953	211	38	249	478	99	577
1954	352	28	380	560	82	642
1955	242	41	283	495	95	590
1956	293	39	332	507	81	588
1957	159	45	204	399	89	488
1958	270	40	310	565	138	703
1959	271	40	311	582	99	681
1960	163	34	197	574	92	667
1961	155	14	169	536	83	619
1962	179	53	232	519	116	635
1963	145	122	267	488	227	715
1964	180	22	302	699	65	764
1965	190	16	206	683	99	782
1966	240	54 **	294	713	165	878
1967	184	20	204	701	93	794
1968	155	90	245	684	206	890

\* Marginal areas not censused completely.

\*\* Total does not include 11 cygnets captured from the refuge for transfer to Turnbull National Wildlife Refuge.