

3.—REPORT OF DISTRIBUTION OF FISH AND EGGS FROM JULY 1, 1888, TO JUNE 30, 1889.

The number of fish and eggs distributed from July 1, 1888, to June 30, 1889, was 348,557,230, an increase of nearly 108,000,000 over the aggregate shipments during the preceding year. The details of the work are shown in the Summary of Distribution, from which it will be seen that important additions have been made to the list of species sent out and noteworthy changes in the character of the fishes deposited.

For example, almost a half million 1-year-old fishes were included in this distribution; among them were nearly 100,000 rainbow trout, 29,000 lake trout, besides many thousands of brook trout, Atlantic salmon, landlocked salmon, wall-eyed pike, red-eye perch, white bass, black bass, crappie, buffalo, and catfish. Of the 33 species distributed the 12 which were furnished in the greatest number were whitefish, shad, wall-eyed pike, cod, sheepshead, sea bass, California salmon, pollock, lake trout, Atlantic salmon, lobster, and landlocked salmon, which were deposited in numbers ranging from over 800,000 of the last-named to more than 135,000,000 of the first-mentioned.

It will be observed that a great many new and valuable species have been added to the list, among them the wall-eyed pike, of which more than 50,000,000 were hatched; the sheepshead, which were deposited in Florida waters to the number of 14,000,000; and a great many of the fishes indigenous to the Mississippi Valley, such as red-eye perch, spotted catfish, buffalo, crappie, white bass, black bass, pickerel, and white perch, or fresh-water drum. The yearling fishes rescued from lakes and sloughs caused by overflow of the Mississippi River, and included in the distribution for 1889, aggregated nearly 100,000. These were collected at Quincy, Ill., and widely distributed in suitable waters.

In shipping California salmon eggs from Baird station to the California State hatchery at Sisson, a new form of transportation box was used, a description of which will be found elsewhere in this report.

The transplanting of lobsters to the Pacific coast was continued in 1889, and upward of 200 adults, of which 54 were egg-bearing females, were carried to Puget Sound.

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Summary of distribution for the year ending June 30, 1889.

Species.	Eggs.	Fry.	One year old.	Total.
California salmon	3,450,000	6,000,000		9,450,000
Atlantic salmon	1,395,000	855,000	13,061	2,263,061
Land-locked salmon	510,000	300,950	5,984	822,074
Rainbow trout	167,000		97,213	264,213
Loch Leven trout	120,000			120,000
Brown trout	110,000			110,000
Brook trout	207,000	21,000	14,450	242,450
Lake trout	2,197,000	1,531,000	29,035	3,757,035
Sälbling	9,000			9,000
Whitefish	54,650,000	81,135,000		135,785,000
Shad		96,454,000		96,454,000
Sole			28	28
Cod		19,148,000		19,148,000
Pollock		7,258,000		7,258,000
Mackerel		185,000		185,000
White perch (fresh-water drum)			2,485	2,485
Scup		30,000		30,000
Sheepshead		14,000,000		14,000,000
Red-eye perch (rock bass)			5,630	5,630
Crappie			16,768	16,768
Black bass			17,087	17,087
Sunfish			3,688	3,688
Sea bass		1,025,000		1,025,000
Wall-eyed pike (pike perch)		50,190,000	5,600	50,195,600
White bass			15,552	15,552
Pickering			7,811	7,811
Carp			460	460
Tench			1,530	1,530
Goldfish			9,610	9,610
Carp			170,402	170,402
Buffalo			10,360	10,360
Catfish			20,180	20,180
Lobster		1,574,000	(adults) 333	1,574,333
Total	62,815,000	279,712,950	448,767	342,976,717
Loss in transit		5,540,000	40,613	5,580,613
Total furnished for distribution	62,815,000	285,252,950	489,380	348,557,330

Statement of the distribution of California salmon eggs and fry from Clackamas and Baird Stations, season of 1888 and 1889.

Summary.	Eggs.	Fry.
Clackamas Station: Deposited in Clackamas River and tributaries		4,500,000
Baird Station: Forwarded to the Société d'Acclimatation, Paris	100,000	
Transferred to the Fish Commission Exhibit, Centennial Exposition, Cincinnati, Ohio	*50,000	
Forwarded to the California Fish Commission for hatching and deposit in the Little Sacramento	3,300,000	
Deposited in McCloud River		1,500,000
Total	3,450,000	6,000,000

*Of this number 34,000 fry were produced and deposited in Grand Traverse Bay, near Traverse City, Mich., October 28, 1888.

Statement of the distribution of Penobscot or Atlantic salmon eggs, fry, and 1-year-old fish, for the year ending June 30, 1889.

Disposition.	Number.
<i>Eggs.</i>	
From Bucksport Station:	
New Hampshire State fish commission	200,000
Benj. Lincoln, Dennyville, Me	40,000
A. J. Darling, Enfield, Me	50,000
W. R. Munson, Grand Lake Stream, Maine	200,000
Charles Dummer, Weld, Me	150,000
Hatchery on Fulton chain of lakes, Hamilton County, New York	25,000
Biaby Club Hatchery, Herkimer County, New York	17,500
Victor Gangoterra, Quito, Ecuador	5,000
Transferred to U. S. F. C. station, Cold Spring Harbor, New York	707,500
Total number of eggs	1,395,000

Statement of the distribution of Penobscot or Atlantic salmon eggs, fry, and 1-year-old fish, for the year ending June 30, 1889—Continued.

Disposition.	Number.
<i>Fry.</i>	
From Bucksport Station:	
Tributaries of Alamoosook Lake near Orland, Me.	10,000
From Grand Lake Stream Station: *	
Grand Lake and tributaries, near Grand Lake Stream, Me.	198,000
From Cold Spring Harbor Station: *	
Applicants in Vermont	50,000
Tributaries of Hudson River, New York:	
Balm of Gilead Creek	50,000
Raymond Creek	50,000
Carr's Creek	50,000
Clendon Creek	55,000
Thirteenth Creek	55,000
Minerva Creek	50,000
Martha Creek	50,000
Boreas Creek	55,000
Mill Creek	50,000
Eleventh Creek	48,000
Racket Creek	20,000
Nissequage River, tributary of Long Island Sound	
Total number of fry	855,000
<i>One year old.</i>	
From Bucksport Station:	
Tributaries of Alamoosook Lake near Orland, Me.	13,961

* Product of eggs received from Bucksport Station.

Statement of the distribution of landlocked salmon eggs, fry, and 1-year-old fish, for the year ending June 30, 1889.

Disposition.	Number.
<i>Eggs.</i>	
From Grand Lake Stream Station:	
New Hampshire State fish commission	50,000
Minnesota State fish commission	25,000
Iowa State fish commission	25,000
Michigan State fish commission	100,000
Deutscher Fischerei Verein, Berlin, Germany	50,000
Herr von Behr, Schmoldow, Germany	50,000
Richard Young, Edinburgh, Scotland	25,000
Transferred to U. S. F. C. station, Bucksport, Me.	25,000
Transferred to U. S. F. C. station, Cold Spring Harbor, N. Y.	50,000
Transferred to U. S. F. C. station, Washington, D. C.	30,000
Transferred to U. S. F. C. station, Duluth, Minn.	50,000
Transferred to U. S. F. C. station, Wytheville, Va.	30,000
Total number of eggs	510,000
<i>Fry.</i>	
From Grand Lake Stream Station:	
Grand Lake and tributaries, near Grand Lake Stream, Me.	205,000
From Cold Spring Harbor Station: *	
Lake Ronkonkoma, Long Island, New York	10,000
Lake in Passaic County, N. J.	10,000
From Central Station: *	
Deer Creek near Belair, Md.	27,000
From Wytheville Station: *	
Reed Creek, Wythe County, Va.	4,950
From Duluth Station: *	
Lake Superior off mouth of Lester River, Minn.	50,000
Total number of fry	306,950
<i>One year old.</i>	
From Bucksport Station:	
Craig's Pond, near Bucksport, Me.	5,084

* Product of eggs received from Grand Lake Stream Station.

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Statement of the distribution of rainbow trout eggs and 1-year-old fish, for the year ending June 30, 1889.

Disposition.	Number.
<i>Eggs.</i>	
From Northville Station:	
Transferred to U. S. F. C. station, Bucksport, Mo	2,500
J. N. Granger, St. Paul, Minn	15,000
New Hampshire State fish commission	10,000
W. A. Scott, Springfield, Ohio	10,000
George M. Fuller, Fair Haven, Vt	10,000
E. Cházari, city of Mexico, for the Republic of Mexico	10,000
From Wytheville Station:	8,000
Delaware State fish commission	13,000
Wyoming fish commission	8,000
Henry Stewart, Walhalla, S. C	8,000
B. S. Hurlbut, Lynn, Mass	25,000
Gordon Land, Mammoth Springs, Ark	2,500
Dr. Thomas Miller, Fincastle, Va	30,000
Midland Counties Fish-Cultural Association, Malvern Wells, England	15,000
Société d'Acclimatation, Paris, France	15,000
Total	167,000
<i>One year old.</i>	
From Northville Station:	
Blue River, near Shelbyville, Ind	1,000
Tippecanoe River, near Monticello, Ind	500
Pleasant Lake, near Angola, Ind	500
Fox Lake, near Angola, Ind	500
James Lake, near Angola, Ind	3,900
Flat Rock River, near Fairland, Ind	500
Brandywine Creek, near St. Paul, Ind	500
Sugar Creek, near Shelbyville, Ind	1,000
Sylvan Lake, near Rome City, Ind	750
To applicants in Indiana	2,000
Plum Creek, near Buena Vista, Iowa	1,480
Glemaire Creek near Buena Vista, Iowa	1,000
Scatin Creek, near Buena Vista, Iowa	500
Floyd Creek, near Buena Vista, Iowa	1,500
Sin McGill Creek, near McGregor, Iowa	1,200
Bloody Run, near McGregor, Iowa	520
• Clear Creek, near Lansing, Iowa	500
McGuire Creek, near Lansing, Iowa	500
Village Creek, near Lansing, Iowa	500
Waxford Creek, near Lansing, Iowa	800
Waterloo Creek, near Lansing, Iowa	1,000
Baldwin's Springs, near Cresco, Iowa	1,000
Mitchell Creek, near Cresco, Iowa	500
Nichols Creek, near Cresco, Iowa	275
Catfish Creek, near Dubuque, Iowa	1,500
Stoney Creek, near London, Ky	500
Sinking Creek, near London, Ky	500
Nolin River, near Elizabethtown, Ky	50
To applicants in Kentucky	100
Brandywine Creek, near Niles, Mich	3,000
Tributaries of Long Lake, near Alpena, Mich	3,000
Cedar River, near Meredith, Mich	1,000
Au Sable River, near Frederick, Mich	1,000
Stacey's Creek, near Vanderbilt, Mich	1,000
Stewart's Creek, near Trowbridge, Mich	1,000
State fish commission of Michigan	4,000
To applicants in Michigan	825
Walton Creek, near Norfolk, Nebr	200
Long Pine Creek, near Long Pine, Nebr	600
Bone Creek, near Ainsworth, Nebr	200
Evergreen Creek, near Wood Lake, Nebr	400
Minnechaduga Creek, near Valentine, Nebr	900
Minnechaduga Creek, near Crookston, Nebr	400
Bordeaux Creek, near Bordeaux, Nebr	200
Chadron Creek, near Chadron, Nebr	200
White River, near Fort Robinson, Nebr	1,100
White River, near Audrewa, Nebr	785
State fish commission of Nebraska	500
Applicants in Ohio	1,050
State fish commission of Ohio	2,000
Emory River near Nemo, Tenn	500
From Wytheville Station:	750
Crawfish Springs, near Crawfish Spring, Ga	740
Chattooga River, near Trion Factory, Ga	1,500
Stoney Creek, near London, Ky	2,000
Cove Creek, near Marion, N. C	150
North Packollet River, near Tryon City, N. C	100
Sandy Mush Creek, near Trail Branch, N. C	100

Statement of the distribution of rainbow trout eggs and 1-year-old fish, for the year ending June 30, 1889—Continued.

Disposition.	Number.
<i>From Wytheville Station—Continued.</i>	
Green River, near Saluda, N. C.	1,000
Johnson's Creek, near Waynesville, N. C.	100
To applicants in North Carolina	78
Hoyland's Run, near Williamsport, Pa.	497
Tributaries of Antietam Creek, near Waynesboro, Pa.	3,000
Tributaries of Susquehanna River, near Phillipsburgh, Pa.	1,196
Yellow Breeches Creek, near Mechanicsburgh, Pa.	2,800
Clear Fork River, near Robbins, Tenn.	1,000
To applicants in Tennessee	300
Wheat Creek, near Liberty, Va.	1,000
Cripple Creek, near Speedwell, Va.	250
Elk Creek, near Glenwood, Va.	1,000
Mill Creek, near Stuart, Va.	600
White Top Fork of Laurel River, near Abingdon, Va.	1,000
Brumley Creek, near Abingdon, Va.	500
Cove Creek, in Wythe County, Va.	2,000
North Fork of Clinch River, near Tazewell, Va.	500
Staly's Creek, near Marion, Va.	2,000
Walker's Creek, near Seddon, Va.	1,000
Cowardon Run, near Warm Springs, Va.	1,000
Wolf Creek, near Abingdon, Va.	500
North River, near Shefflett's, Va.	1,480
Buffalo Branch, near Buffalo Gap, Va.	097
Shenandoah River, near Staunton, Va.	1,000
Dickenson Mill Creek, near Millboro, Va.	990
Lick Run, near Millboro, Va.	1,000
Bratton's Mill Creek, near Millboro, Va.	2,000
To applicants in Virginia	3,780
<i>From Central Station:*</i>	
Delaware State fish commission	500
To applicants in District of Columbia	580
Tributaries of Patuxent River, near Laurel, Md.	500
To applicants in Maryland	1,300
Steen's Run, near Mortonville, Pa.	1,500
Trout Run, near Shrewsbury, Pa.	500
Yellow Breeches Creek, near Mechanicsburgh, Pa.	1,000
Walker's Run, near White Rock, Pa.	200
Alexander Run, near White Rock, Pa.	* 300
Mehoopany Creek, near Mehoopany, Pa.	1,400
To applicants in Pennsylvania	500
Cameron Run, near Alexandria, Va.	500
To applicants in Virginia	400
Flowing Springs, near Charlestown, W. Va.	300
To applicants in West Virginia	800
Total	97,213

* Of this distribution Northville Station produced 1,978, Wytheville Station 8,302.

SUMMARY.

Station at which produced.	Eggs.	Yearlings.
Northville	57,500	51,650
Wytheville	109,500	49,155
Total	167,000	100,805
<i>Losses:</i>		
In transit		1,039
At Central Station		1,853

Statement of the distribution of Loch Leven trout eggs from Northville Station for the year ending June 30, 1889.

Disposition.	Number of eggs.
Nebraska State fish commission	30,000
New Hampshire State fish commission	30,000
Pennsylvania State fish commission	30,000
Wisconsin State fish commission	30,000
Total	120,000

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Statement of the distribution of brown trout eggs (received by international exchange from Berneuchen and Schmoldow, (Germany) during the year ending June 30, 1889.

Disposition.	Number of eggs.
From Berneuchen:	
To U. S. F. C. station, Duluth, Minn	44, 000
From Schmoldow:	
To New York State fish commission	48, 000
To U. S. F. C. station, Northville, Mich	18, 000
Total	110, 000

Statement of the distribution of brook-trout eggs, fry, and 1-year-old fish for the year ending June 30, 1889.

Disposition.	Number.
<i>Eggs.</i>	
From Northville Station:	
Delaware State fish commission	10, 000
Minnesota State fish commission	50, 000
New Jersey State fish commission	15, 000
Byron S. Huribut, Lynn, Mass	5, 000
Andrew Egbert, Castalia, Ohio	20, 000
A. B. Smith, Bellevue, Ohio	15, 000
Midland Counties Fish-Cultural Association, Malvern Wells, England	25, 000
E. Cházari, city of Mexico, for the Republic of Mexico	10, 000
Transferred to U. S. F. C. station, Bucksport, Me	2, 000
Transferred to U. S. F. C. station, Wytheville, Va	25, 000
Transferred to U. S. F. C. station, Washington, D. C	30, 000
Total	207, 000
<i>Fry.</i>	
From Central Station (eggs furnished by Northville Station):	
To applicants in Pennsylvania	3, 000
To applicants in West Virginia	4, 000
Island Run, near Wilsona, W. Va	0, 000
Patapco River, near Woodstock, Md	5, 000
Total	21, 000
<i>One year old.</i>	
From Northville Station:	
Tippecanoe River, near Monticello, Ind	500
To applicants in Indiana	225
Nolan River, near Elizabethtown, Ky	500
Paw Paw River, near Lawton, Mich	250
Pine Creek, near Kalamazoo, Mich	200
Harrison's Branch of Tobacco River, near Hatton, Mich	250
South Branch of Tobacco River, near Farwell, Mich	250
Chippewa Creek, near Chippewa, Mich	250
Kinney Creek, near Baldwin, Mich	250
Sabie River, near Manistee Junction, Mich	1, 000
Ramsey's Creek, near Jackson, Mich	200
Michigan State fish commission	3, 000
To applicants in Michigan	450
Cold Creek, near Castalia, Ohio	3, 000
Rockwell Springs, near Castalia, Ohio	2, 000
Ohio State fish commission	1, 000
To applicants in Ohio	500
From Wytheville Station:	
To applicants in Virginia	500
From Central Station (product of Wytheville Station):	
To applicants in Tennessee	50
To applicants in Delaware	75
Total	14, 450
<i>Losses (one year old).</i>	
In transit	50
At Central Station	00

Statement of the distribution of lake trout eggs, fry, and 1-year-old fish, for the year ending June 30, 1889.

Disposition.	Number.
<i>Eggs.</i>	
From Northville station:	
Iowa State fish commission	50,000
Nebraska State fish commission	100,000
Nevada State fish commission	30,000
New Hampshire State fish commission	100,000
Vermont State fish commission	100,000
Wyoming State fish commission	200,000
C. F. Stoddard, Cambridge, N. Y.	25,000
E. Cházari, City of Mexico, for the Republic of Mexico	50,000
Transferred to U. S. F. C. station, Duluth, Minn.	1,000,000
Transferred to U. S. F. C. station, Washington, D. C.	40,000
Transferred to U. S. F. C. station, Cold Spring Harbor, N. Y.	500,000
Transferred to U. S. F. C. station, Bucksport, Me.	2,000
Total	2,197,000
<i>Fry.</i>	
From Alpena Station:	
Long Lake near Alpena, Mich.	80,000
From Duluth Station (eggs furnished by Northville Station):	
Lake Superior, off mouth of Lester River, Minnesota	985,000
From Central Station (eggs furnished by Northville Station):	
Applicants in Pennsylvania	11,000
Allegheny Creek, near Gibraltar, Pa.	10,000
Mill Creek, near Gibraltar, Pa.	10,000
Seidel's Creek, near Gibraltar, Pa.	5,000
From Cold Spring Harbor Station:	
Lake Ronkonkoma, Long Island, N. Y.	180,000
Great Pond, Long Island, N. Y.	100,000
Lake Glenida, Putnam County, N. Y.	50,000
Racquette Lake, Hamilton County, N. Y.	100,000
Total	1,531,000
<i>One year old.</i>	
From Northville Station:	
Lake Maxinkuckee, near Indianapolis, Ind.	900
Crooked Lake, near Angola, Ind.	4,760
Fox Lake, near Angola, Ind.	2,700
Silver Lake, near Angola, Ind.	1,985
Sylvan Lake, near Rome City, Ind.	3,000
To applicants in Indiana	1,000
Black Walnut Lake, near Birmingham, Mich.	1,500
To applicants in Michigan	400
Michigan State fish commission	12,125
From Wytheville Station:	
Salt Ponds, near Eggleston, Va.	575
Total	29,035

SUMMARY.

Station at which produced.	Eggs.	Fry.	One year old.
Northville	2,197,000		28,525
Alpena		80,000	
Duluth		985,000	
Central Station		38,000	
Cold Spring Harbor		430,000	
Wytheville			575
Total	2,197,000	1,531,000	29,100
Loss in transit			65

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Statement of the distribution of sáblbing eggs (received by international exchange from Berneuchen, Germany) during the year ending June 30, 1889.

Disposition.	Number.
From Berneuchen: To U. S. F. C. station, Duluth, Minn	9, 000

Statement of the distribution of whitefish eggs and fry for the year ending June 30, 1889.

Disposition.	Number.
<i>Eggs.</i>	
From Northville Station:	
Delaware fish commission	1, 000, 000
Wisconsin fish commission	5, 000, 000
Midland Counties Fish-Cultural Association, Malvern Wells, England	150, 000
Herr Von Bohr, Schmoldow, Germany	100, 000
Transferred to U. S. F. C. Car No. 3 for hatching and deposit in public waters in Idaho, Washington, and Oregon	5, 000, 000
From Alpena Station:	
Transferred to U. S. F. C. station at Duluth, Minn	5, 000, 000
Transferred to U. S. F. C. station at Washington, D. C	5, 000, 000
From Sandusky Station:	
Pennsylvania fish commission	24, 400, 000
Transferred to U. S. F. C. station at Duluth, Minn	9, 000, 000
Total	54, 650, 000
<i>Fry.</i>	
From Alpena Station:	
Planted in Lake Huron	20, 320, 000
Planted in Lake Michigan	3, 000, 000
From Sandusky Station:	
Planted in Lake Erie	40, 700, 000
From Duluth Station (eggs received from Alpena and Sandusky Stations):	
Planted in Lake Superior	8, 000, 000
From Central Station (eggs received from Alpena Station):	
Planted in Lake Ontario	4, 595, 000
By U. S. F. C. Car No. 3 (eggs received from Northville Station):	
Cœur d'Alene Lake, Idaho	1, 950, 000
Pend d'Oreille Lake, Idaho	1, 300, 000
Washington Lake, Washington	385, 000
Camas Lake, Oregon	300, 000
Klamath Lake, Oregon	400, 000
Chotaw Lake, Oregon	85, 000
Callaby Lake, Oregon	100, 000
Total	81, 135, 000

Statement of the deposits of shad fry in the public waters of the United States, during the season of 1889.

Date.	Point of deposit.	Stream.	River basin.	Number deposited.
May 23	Dighton, Mass.	Taunton River	Narragansett Bay	1,747,000
15	Providence, R. I.	Palmer River	do	2,455,000
28	Warehouse Point, Conn.	Connecticut River	North Atlantic Coast.	1,803,000
17	Waterford, N. Y.	Hudson River	Hudson River	1,700,000
17	Albany, N. Y.	do	do	300,000
19	Troy, N. Y.	do	do	580,000
27	West Point, N. Y.	do	do	761,000
June 4	do	do	do	1,095,000
7	do	do	do	652,000
May 31	Newburgh, N. Y.	do	do	895,000
15	Port Jervis, N. Y.	Delaware River	Delaware Bay	792,000
June 11	Gloucester, N. J.	do	do	1,004,000
May 21	Bridgeton, N. J.	Cohansey River	do	1,147,000
June 10	Lambertville, N. J.	Delaware River	do	970,000
11	do	do	do	900,000
May 13	Delaware Water Gap, Pa.	do	do	475,000
17	do	do	do	743,000
18	do	do	do	2,227,000
20	do	do	do	700,000
28	do	do	do	800,000
30	do	do	do	800,000
17	Easton, Pa.	do	do	750,000
21	do	do	do	720,000
June 1	do	do	do	720,000
3	do	do	do	760,000
8	do	do	do	800,000
4	Pond Eddy, Pa.	do	do	760,000
6	do	do	do	779,000
May 25	Luckawaxen, Pa.	do	do	720,000
12	Wilmington, Del.	Brandywine Creek	do	760,000
15	do	do	do	792,000
21	Middletown, Del.	Appoquinnaek Creek	do	228,400
22	do	do	do	212,976
21	Clayton, Del.	Smyrna Creek	do	228,450
22	do	do	do	212,976
21	Cheswold, Del.	Lelapsic Creek	do	285,500
22	do	do	do	150,732
21	Dover, Del.	Jones Creek	do	285,500
22	do	do	do	212,976
21	Felton, Del.	Murderkill Creek	do	428,250
22	do	do	do	212,976
21	Milford, Del.	Mispillion Creek	do	285,500
22	do	do	do	212,976
21	Ellendale, Del.	Bronckill Creek	do	228,400
22	Millsboro, Del.	Indian River	do	309,388
2	Saunders, Del.	Nanticoke River	Chesapeake Bay	1,600,000
13	Queen Anne, Md.	Tuckahoe River	do	970,000
14	Salisbury, Md.	Wicomico River	do	2,925,000
6	Chestertown, Md.	Chester River	do	500,000
1	Elkton, Md.	Elk River	do	490,000
4	do	do	do	764,000
7	do	do	do	780,000
12	do	do	do	700,000
13	do	do	do	600,000
14	do	do	do	700,000
18	do	do	do	792,000
27	do	do	do	520,000
1	North East, Md.	North East River	do	400,000
1	do	do	do	214,000
3	do	do	do	500,000
4	do	do	do	784,000
7	do	do	do	800,000
13	do	do	do	882,000
14	do	do	do	800,000
18	do	do	do	1,325,000
Apr. 26	Battery Island, Md.	Susquehanna River	do	643,000
May 1	do	do	do	512,000
4	do	do	do	170,000
7	do	do	do	600,000
28	do	do	do	1,000,000
June 20	do	do	do	345,000
1	do	do	do	451,000
May 14	Fites Eddy, Pa.	do	do	844,000
15	do	do	do	800,000
17	Columbia, Pa.	do	do	813,000
10	Peach Bottom, Pa.	do	do	070,000
13	McCall's Ferry, Pa.	do	do	844,000
13	Bush Station, Md.	Bush River	do	800,000
6	Gunpowder Station, Md.	Gunpowder River	do	600,000

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Statement of the deposits of shad fry in the public waters of the United States, during the season of 1889—Continued.

Date.	Point of deposit.	Stream.	River basin.	Number deposited.
May 14	Gunpowder Station, Md	Gunpowder River	Chesapeake Bay	800,000
13	Relay House, Md	Patapsco River	do	742,000
15	do	do	do	701,000
17	do	do	do	909,000
3	Laurel, Md	Patuxent River	do	666,000
14	do	do	do	699,000
Apr. 25	Washington, D. C	Carp Ponds	do	408,000
27	do	do	do	550,000
29	do	do	do	430,000
30	do	do	do	603,000
May 1	do	do	do	925,000
2	do	do	do	932,000
3	do	do	do	400,000
5	Little Falls, Md	Potomac River	do	807,000
20	Fort Washington, Md	do	do	2,994,000
13	Mathias Point, Va	do	do	713,000
4	Occoquan, Va	Occoquan Creek	do	500,000
4	Quantico, Va	Chappawansic Creek	do	750,000
12	Evington, Va	Otter River	do	750,000
13	Catletts, Va	Cedar Run	do	783,000
13	Bristoe, Va	Broad Run	do	784,000
15	Tyo River, Va	Tyo River	do	765,000
14	Rapidan, Va	Rapidan River	do	629,000
14	Milford, Va	Mattaponi River	do	743,000
17	Penola, Va	do	do	659,000
15	Taylorville, Va	Little River	do	399,000
15	Rockfish, Va	Rockfish River	do	659,000
16	Freestone, Va	Neabco Creek	do	932,000
18	Bellfield, Va	Meherrin River	do	020,000
16	Fredericksburgh, Va	Rappahannock River	do	763,000
18	do	do	do	002,000
16	Stony Creek, Va	Stony Creek River	South Atlantic coast	743,000
17	Newport, N. C	Newport River	do	681,000
Apr. 28	Columbia, S. C	Congaree River	do	1,000,000
29	Augusta, Ga	Savannah River	do	1,000,000
May 14	Macon, Ga	Ocmulgee River	do	380,000
Apr. 29	Butler, Ga	Big White Water Creek	Gulf of Mexico	600,000
30	Reynolds, Ga	Flint River	do	794,000
May 14	Ochlocknee, Ga	Ocklocknee River	do	400,000
14	Boston, Ga	Aucilla River	do	300,000
14	Quitman, Ga	Withlacoochee River	do	300,000
14	Allapaha, Ga	Allapaha River	do	400,000
10	Bolton, Ga	Chattahoochee River	do	900,000
11	Montgomery, Ala	Alabama River	do	500,000
11	Hattiesburgh, Miss	Leaf River	do	825,000
11	Enterprise, Miss	Chickasawha River	do	825,000
Total				96,454,000

Summary of production and distribution of shad and shad eggs, season of 1889.

	Fort Wash- ington Sta- tion.	Central Station.	Battery Station.	Steamer Fish Hawk.	Total.	Grand total.
Eggs collected.....	58,233,000		57,809,000	31,396,000		147,438,000
<i>Disposition.</i>						
Fry:						
Deposited in water- whence obtained.....	2,094,000		5,260,000	1,904,000	10,158,000	} 89,322,000
Deposited in other wa- ters.....		23,304,000	34,708,000	21,052,000	79,164,000	
Eggs:						
Delivered to Car No. 2.....		3,578,000			3,578,000	} 12,672,000
Delivered to Car No. 3.....		7,519,000	1,575,000		9,094,000	
Fish lost in hatching.....			673,000		673,000	673,000
Eggs lost:						
In shrinkage en route from Fort Washing- ton to Central Station	7,710,000				7,710,000	} 44,771,000
In incubation.....	275,000	12,753,000	15,593,000	8,440,000	37,061,000	
Total.....	10,979,000	47,254,000	57,809,000	31,396,000		147,438,000

*47,254,000 of these were transferred to Central Station for hatching.

Summary by river basins of shad fry distributed during 1889.

River basin.	No. of shad deposited.	No. of shad lost in transit.	Total.
Tributaries of Narragansett Bay.....	4,202,000	63,000	4,265,000
Tributaries of North Atlantic coast.....	1,803,000		1,803,000
Hudson River and tributaries.....	5,893,000	313,000	6,206,000
Delaware Bay and tributaries.....	22,673,000	256,000	22,929,000
Chesapeake Bay and tributaries.....	62,225,000	1,079,000	54,204,000
Tributaries of South Atlantic coast.....	3,814,000	366,000	4,180,000
Tributaries of Gulf of Mexico.....	5,844,000	2,563,000	8,407,000
Total.....	96,454,000	5,540,000	101,994,000

Statement of the deposit of English sole during the year ending June 30, 1889.

Disposition.	Yearlings.
From Wood's Holl Station: Deposited in Vineyard Sound, near Wood's Holl Station.....	28

Statement of the deposits of codfish fry in the Atlantic Ocean, season of 1888-89.

Disposition.	Number.
From Gloucester Station: Planted off the coast of Massachusetts.....	11,011,000
Wood's Holl Station: Planted off the coast of Massachusetts.....	8,137,000
Total.....	19,148,000

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Statement of the deposit of pollock fry in the Atlantic Ocean, season of 1888-89.

	Fry.
From Gloucester Station: Planted off the coast of Massachusetts.....	7, 258, 000

Statement of the distribution of mackerel during the year ending June 30, 1889.

Disposition.	Fry.
From Wood's Holl Station: Deposited in Vineyard Sound off Wood's Holl Station, Mass	185, 000

Statement of the distribution of scup during the year ending June 30, 1889.

Disposition.	Fry.
From Wood's Holl Station: Deposited in Vineyard Sound off Wood's Holl Station, Mass	30, 000

Statement of the distribution of sheepshead during the year ending June 30, 1889.

Disposition.	Fry.
Hatched on steamer <i>Fish Hawk</i> : Deposited in San Carlos Bay, Florida	14, 000, 000

Statement of the distribution of red-eye perch during the year ending June 30, 1889.

Disposition.	Yearlings.
From Wytheville Station:	
Yadkin River near Salem, N. C.....	500
Applicants in North Carolina	820
Cow Pasture River near Millboro, Va	980
Applicants in Virginia	2, 130
From Central Station, product of Wytheville Station:	
Alabama State Fair Association at Opelika	50
Applicants in Georgia	100
Antietam Creek near Hagerstown, Md.....	500
Applicants in Massachusetts	100
Applicants in New York	300
Applicants in Virginia	50
Max von dem Borne, Bornuechen, Germany	100
Total	5, 630

Statement of the distribution of sea bass during the year ending June 30, 1889.

Disposition.	Fry.
From Wood's Holl Station: Deposited in Vineyard Sound off Wood's Holl Station	1, 025, 000

Statement of the distribution of pike-perch fry, season of 1889.

Date.	Point of deposit.	Waters stocked.	Number.
May 21	Near Duluth, Minn	Lake Superior	3,000,000
Apr 30	Decatur, Ill	Saugamon River	200,000
May 1	Barclay, Ill	do	200,000
May 1	Kankakee, Ill	Kankakee River	6,000,000
Apr 30	Springfield, Ill	Clear Lake	1,000,000
May 1	Lanesville, Ill	Lake Whittimore	1,000,000
1	Railroad crossing, Cass County, Ill	Lake Henderson	100,000
1	St. Mary's, Ill	Embarras River	100,000
1	Olney, Ill	Fox Lake	100,000
1	Martinsville, Ill	Lake Delamutt	100,000
1	Meredosia, Ill	Illinois River	1,300,000
1	Quincy, Ill	Mississippi River	1,300,000
4	Near Bellefontaine, Ohio	Rush Creek	400,000
4	do	Silver Lake	400,000
4	do	Twin Lakes	400,000
4	do	Doup Lake	400,000
4	do	McMillan's Lake	400,000
4	West Liberty, Ohio	Mud River	1,600,000
4	Pickway, Ohio	Big Miami River	1,600,000
4	do	Pickway Ponds	1,600,000
4	Xenia, Ohio	Little Miami River	2,000,000
4	Columbus, Ohio	Scioto River	2,200,000
4	Newark, Ohio	Licking River	1,000,000
4	Dresden Junction, Ohio	Muskingum River	1,600,000
4	Coshocton, Ohio	Tuscarawas River	1,600,000
4	Newcomerstown, Ohio	do	1,200,000
8	State Fish commission of Ohio	Streams in Ohio	10,400,000
9	Callicoon, N. Y	Delaware River	1,450,000
9	Port Jarvis, N. Y	do	1,450,000
9	Lackawaxen, Pa.	do	870,000
9	Easton, Pa	do	1,160,000
9	Reading, Pa	Maiden's Creek	1,160,000
9	Millerstown, Pa	Juniata River	580,000
9	Thompsontown, Pa	do	280,000
9	Port Royal, Pa	do	290,000
9	Mifflin, Pa	do	290,000
9	Lewistown, Pa	do	290,000
9	Ryde, Pa	do	145,000
9	Holidaysburg, Pa	do	290,000
9	Spruce Creek, Pa	Spruce Creek	290,000
9	Harrisburg, Pa	Susquehanna River	435,000
	Total		50,100,000

Produced by Duluth Station 3,000,000
 Produced by Sandusky Station 47,100,000

Statement of the distribution of tench from Central Station (product of carp ponds) for the year ending June 30, 1889.

Disposition.	Yearlings.
Alabama State Fair Association at Opelika	25
Augusta National Exposition at Augusta, Ga	25
Applicants in Georgia	100
Applicants in Indiana	40
Applicants in Kansas	40
Monocacy River, near Frederick Junction, Md	1,000
Applicants in Pennsylvania	100
E. Chazari, City of Mexico, for the Mexican Republic	200
Total	1,530

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Statement of the distribution of goldfish from Central and Wytheville Stations, from July 1, 1888 to June 30, 1889.

State.	No. of applicants.	No. of fish.	State.	No. of applicants.	No. of fish.
Alabama	12	110	Missouri	2	12
Arkansas	1	6	Mississippi	5	30
Connecticut	2	10	Montana Territory	1	3
Dakota Territory	3	112	Nebraska	1	25
Delaware	2	16	New Jersey	10	60
District of Columbia	731	3,626	New York	8	46
Florida	5	34	North Carolina	24	174
Georgia	35	184	Ohio	42	287
Idaho Territory	2	10	Oregon	4	24
Illinois	4	120	Pennsylvania	40	272
Indiana	10	152	South Carolina	9	146
Iowa	10	64	Tennessee	90	540
Kansas	5	24	Texas	9	66
Kentucky	8	90	Utah Territory	4	47
Louisiana	22	138	Virginia	372	2,280
Maryland	44	258	West Virginia	2	66
Massachusetts	6	36	Mexico	1	100
Michigan	2	12			
Minnesota	8	440	Total	1,545	9,610

Statement of carp distributed to private applicants from Nov. 7, 1888, to March 6, 1889.

Date.	Destination.	Point of distribution.	No. of counties supplied.	No. of applicants supplied.	No. of fish distributed.
1888.					
Nov. 27	Alabama	Atlanta, Ga	27	63	1,440
9	Arizona	Kansas City, Mo	4	31	1,080
9	Arkansas	St. Louis, Mo	14	27	520
15	California	Ogden, Utah	3	3	60
9	Colorado	Kansas City, Mo	9	19	480
12	Connecticut	Jersey City, N. J.	4	8	160
Oct. 6	District of Columbia	Washington, D. C.		2	220
Nov. 19	Dakota	St. Paul, Minn.	13	22	520
Dec. 4	Delaware	Washington, D. C.	2	2	1,020
Nov. 27	Georgia	Atlanta, Ga	50	80	4,810
16	Idaho	Salt Lake City, Utah	6	22	440
21	Illinois	Chicago and Quincy, Ill	40	68	36,290
7	Indiana	Indianapolis, Ind.	42	87	3,700
9	Indian Territory	St. Louis, Mo.	4	7	2,120
14	Iowa	Des Moines, Iowa	45	72	5,605
12	Kansas	Kansas City, Mo	72	270	6,790
10	Kentucky	Indianapolis, Ind.	19	32	870
12	Maine	Jersey City, N. J.	5	7	140
Dec. 4	Maryland	Washington, D. C.	13	28	650
Nov. 12	Massachusetts	Jersey City, N. J.	4	6	630
21	Michigan	Detroit, Mich	25	35	640
19	Minnesota	St. Paul, Minn	10	10	5,180
12	Missouri	Kansas City, Mo.	11	24	640
12	Nebraska	Omaha, Nebr	17	27	540
15	Nevada	Ogden, Utah	1	1	20
12	New Hampshire	Jersey City, N. J.	5	5	130
12	New Jersey	do	9	18	360
Dec. 18	North Carolina	Raleigh, N. C.	45	83	1,700
Nov. 12	New York	Jersey City, N. J.	43	120	41,740
9	New Mexico	El Paso, Tex.	11	20	1,440
5	Ohio	Columbus and Cincinnati	43	60	3,070
21	Pennsylvania	Washington, D. C.	48	165	4,560
12	Rhode Island	Jersey City, N. J.	1	1	20
27	South Carolina	Augusta, Ga	18	25	530
Dec. 12	Tennessee	Chattanooga, Tenn	31	68	1,300
Nov. 15	Utah	Ogden and Salt Lake City, Utah	21	675	17,400
12	Vermont	Jersey City, N. J.	2	3	60
20	Virginia	Washington, D. C., and Wytheville, Va.	67	299	7,010
Dec. 3	West Virginia	Washington, D. C.	11	24	500
Nov. 19	Wisconsin	St. Paul, Minn.	18	21	720
14	Wyoming	Ogden, Utah	1	1	60
1889.					
Feb. 13	Florida	Jacksonville, Fla	13	19	420
Jan. 17	Louisiana	New Orleans, La	11	22	460
18	Mississippi	Jackson, Miss	20	42	822
18	Montana	Helena, Mont	10	33	670
Mar. 6	Oregon	Portland, Oreg	3	12	280
Jan. 9	Texas	Dallas, Tex	35	54	1,460
Mar. 6	Washington	Tacoma, Wash	11	21	420
Jan. 22	Canada	Detroit, Mich	2	2	70
8	Mexico	Laredo, Tex	1	1	5,000
	Total		920	2,776	135,047

Deposits of carp in the public waters of the United States from November 7, 1888, to March 22, 1889.

Date.	State to which destined.	Point of deposit.	Waters stocked.	No. of fish.
1888.				
Nov. 19	Dakota	Near Mitchell	Dakota River	500
19	do	Near Mandan	Cannon Ball River	500
19	do	do	Big Heart River	500
19	do	do	Little Heart River	500
19	do	do	Knife River	500
Dec. 15	Georgia	Near Augusta	Savannah River	1,500
Nov. 28	do	Near Covington	Yellow River	1,000
7	Indiana	Near Knightstown	Branch of Blue River	200
12	Kansas	Near Kansas City	Kansas River	1,000
Dec. 20	North Carolina	Near Salisbury	Yadkin River	2,455
21	do	Near Pedee Station	Pedee River	2,430
Nov. 14	Ohio	Near Zanesville	Muskingum River	1,500
15	do	Near Columbus	Scioto River	10,000
17	do	Near Cincinnati	Ohio River	900
Dec. 14	Tennessee	Near Springfield	Red River	5,000
1889.				
Jan. 16	Louisiana	Near New Orleans	Mississippi River	200
9	Maryland	Near Frederick Junction	Monocacy River	4,000
Feb. 13	Florida	Near Palmer	Wells Lake	1,600
Mar. 22	Virginia	Near Wytheville	Cripple Creek	1,070
	Total			35,355

SUMMARY.

States supplied	38
Territories supplied	10
Foreign countries supplied	2
Public streams stocked	19
Counties supplied	920
Applicants supplied	2,770
Total number of fish:	
To applicants	135,047
To public waters	35,365
	170,402
Loss in transit	38,841
Total furnished for distribution	209,243
Produced at carp ponds, Washington, D. C.	190,928
Produced at Wytheville Station	18,315

*Statement of the distribution of breeding lobsters for the year ending June 30, 1889.**

Disposition.	Males.	Females.
Collected at Wood's Holl Station and transported and deposited by U. S. Fish Commission car No. 3:		
Pacific Ocean, off Cape Disappointment, Wash.	25	63
Pacific Ocean, off Shoalwater Bay, Wash.	7	15
Puget Sound, off Scow Bay, Wash.	8	16
Puget Sound, off Hudson Point, Wash.	8	17
Puget Sound, off Wilson's Point, Wash.	24	50
Shipped via steamer from New York City:		
Gulf of Mexico, off Galveston, Texas.	50	50
Total	122	211

* Besides this distribution of adults, 1,574,000 young, hatched at Wood's Holl, Massachusetts, were deposited in Vineyard Sound.

Distribution of indigenous fishes of the Mississippi Valley from Quincy, Illinois—Season of 1888.

Point of deposit.	Stream.	Catfish.	Buffalo.	Crappie.	White bass.	Black bass.	Sunfish.	Pickereel.	White perch.	Wall-eye pike.	Carp sucker.	Total No. planted.
Zanesville, Ohio	Muskingum River	4, 225	1, 325	390	475	500	375	300	275	100		7, 975
Edinburgh, Ind.	Blue River	725	825	850	325	225	250	200	200	200		3, 800
Danville, Ill.	Vermillion River	1, 000	300		1, 300	1, 000	170	500	500	500	10	4, 980
Dixon, Ill.	Rock River	900	100	1, 000	900	800				250		3, 950
Belleville, Ill.	City reservoir	50	50		100	50		50				400
Do	Gilmore Lake	100		200	70	100	80	100	50			700
New Athens, Ill.	Perkins Lake	75	75	500	200	150		300	100			1, 400
Duquoin, Ill.	Cherry Lake	200	150	150	200	150		100	50	150		1, 000
Macomb, Ill.	Lake at Macomb	100	20	150	100	50	50	50				520
Galesburg, Ill.	Lake at Macomb	400	500	500	400	400	150	300	200	200		2, 700
Do	C. B. and Q. R. Co.'s ponds	250	150	300	200	250	88	300	200	150		1, 988
Aurora, Ill.	Fox River	200	150	300	1, 000	800	125	150	50	50		2, 775
Kankakee, Ill.	Kankakee River	600	300	600	600	600	600	300	300	300	150	3, 000
McHenry, Ill.	Fox Lake	365	275	850	300	500	200	500	300	500		3, 970
Gladstone, Ill.	Crystal Lake	575	425	750	175	125	200	100	150	100		2, 600
Macoupin, Ill.	Beaver Dam Lake	500	480	1, 000	1, 500	1, 500		1, 000				4, 480
Chicago, Ill.	Ponds in Humboldt Park	300	150	600	150	150						1, 350
Do	Ponds in Garfield Park	300	150	600	150	150						1, 350
Do	Ponds in Douglas Park	400	260	800	200	190	100	100	100	100		1, 850
Berlin, Ill.	Wabash Railroad Company's ponds	400	450	300	150	200	100	100	100	100		1, 900
Lanesville, Ill.	Lake Whittmore	390	475	300	135	200	100	100	100	100		1, 900
Mitchell, Ill.	Long Lake	100	300	100		100					100	700
Shelbyville, Ill.	Reno Lake	400	300	400	200	200	100	100	100	100		2, 000
Charleston, Ill.	Embarras River	400	150	375	275	200	150	175	200	150		1, 800
Bowling Green, Ky.	Barren River	675	650	850	350	375	200	200	200	200		3, 900
Munfordville, Ky.	Green River	800	725	800	350	300	200	200	200	200		3, 850
Crisp, Mo.	Lake McDonald	1, 200	75	1, 000	1, 400	1, 300	50	250	200	150		5, 125
Doniphan, Mo.	Current River	250	250	500	1, 000	1, 500	250	500	500	500		5, 000
Hellon, Mo.	St. L. K. and N. W. R. Co.'s ponds	125	250	250	250	270	125	125	125	125		1, 950
Ashburn, Mo.	Lake near Marceline	100	50	100	50	150	50	50				1, 250
Marceline, Mo.	King's Lake	125	125	250	250	250	125	125	125	125		1, 250
Harrison, Mo.	King's Lake	125	125	250	250	250	125	125	125	125		1, 250
Leatlins, Mo.	King's Lake	125	125	250	250	250	125	125	125	125		1, 250
Lake George, Wis.	Geneva Lake	1, 980	500		2, 400	2, 850		500				9, 230
Nebraska City, Nebr.	Lake near Nebraska City	50		50	75							230
Seward, Nebr.	Blue River	370	375	375	170	200	150	100	100	100		1, 840
Ravenna, Nebr.	Beaver Creek	370	375	375	170	200	150	100	100	100		1, 840
Norfolk, Nebr.	Elkhorn River	200	100	200	300	400	200	200	200	200		1, 915
Stuart, Nebr.	do	450	400	500	600	900	600	600	600	600		5, 250
I twin Bridges, Del.	Brandywine Creek			3	7	97		36	10			153
Total		20, 150	19, 300	16, 768	15, 552	17, 687	3, 688	7, 811	2, 465	5, 660	460	101, 591