

PROGRESS AND RESULTS OF FISH CULTURE.**GERMAN CARP.**

[From the Galveston Daily News, March 15, 1882.]

KOPPERL, *March 14.*—In December last, Mr. M. B. Hendricks, one of our most enterprising farmers, obtained from the fish commissioner a limited number of German carp. When brought here they were about one inch long. Now they are about six inches long and growing finely. Mr. Hendricks has expended a good deal of time and money in preparing for this experiment, and it bids fair to succeed. He has two large ponds and is building a third, all fed by springs on his farm. He has a fine supply of native fish, also.

RIXFORD, FLA., *March 13, 1882.*

DEAR SIR: I am pleased to be able to report that this morning, for the first time, my carp show signs of spawning. They come to the shore in pairs, and by threes and fours; show no signs of fear when I approach, evidently attending to business. Will report again as they hatch.

Very respectfully, yours,

GEO. C. RIXFORD.

Prof. S. F. BAIRD.

The fish above referred to were sent from Washington, November 6, 1879.

**SUMMARY OF FISHING RECORDS, FOR SHAD AND ALEWIVES
KEPT AT WILLOW BRANCH FISHERY, NORTH CAROLINA, FROM
1835 TO 1874.**

By J. W. MILNER.

The following tables, prepared by the late Prof. J. W. Milner, chief assistant U. S. Fish Commission, are the first of a series designed by him to place on record all accessible data exhibiting the products and illustrating the fluctuations of our river fisheries.

Willow Branch Fishery, North Carolina, situated just within the mouth of the Chowan River, was one of the most valuable of the extensive seine fisheries lying around the head of the Albemarle. Its records, running almost continuously from 1835 to 1874, present most interesting material for study; and, when taken in connection with other records of the Albemarle fisheries which are extant, and cotemporaneous meteorological observations, will probably furnish valuable conclusions in regard to the laws or influences determining the great seasonal fluctuations in the river fisheries.

Summary of fishing records for shad and alewives, kept at Willow Branch Fishery, North Carolina, from 1835 to 1874.

Years and months.	Beginning of season.	Ending of season.	Number of days.	Total of shad.	Total of alewives.	Average per diem of shad.	Average per diem of alewives.	Date of maximum.	
								Shad.	Alewives.
1835.....	March 15.....	May 9.....	51	33,259	484,600	652	9,502	April 6-14.	April 13-19.
March.....			12	5,441	57,600	453	4,800		
April.....			30	26,645	344,500	888	11,483		
May.....			9	1,173	82,500	130	9,166		
1836.....	March 16.....	May 7.....	53	13,231	1,236,700	249	23,333	April 16-19.	April 17-26.
March.....			16	3,160	28,100	197	1,756		
April.....			30	9,619	939,600	320	31,320		
May.....			7	1,462	269,000	208	38,428		
1837.....	March 16.....	May 6.....	52	34,169	1,982,300	657	38,121	April 9-21.	April 23 and 24.
March.....			16	7,453	76,700	465	4,793		
April.....			30	24,566	1,635,600	818	54,520		
May.....			6	2,060	270,000	343	45,000		
1838.....	March 18.....	May 8.....	52	32,204	1,093,100	619	21,021	March 30-April 6.	April 17-19.
March.....			14	9,480	56,100	677	4,007		
April.....			30	19,739	755,000	657	26,166		
May.....			8	2,985	252,000	373	31,500		
1839.....	March 14.....	May 9.....	57	73,130	1,595,500	1,282	27,991	April 4-6.	April 26-May 2.
March.....			18	27,946	90,500	1,552	5,027		
April.....			30	43,351	1,205,000	1,445	40,166		
May.....			9	1,833	300,000	203	33,333		
1840.....	March 12.....	May 5.....	55	51,674	3,313,900	939	60,282	March 12-16.	April 16-23.
March.....			20	28,115	164,900	1,405	8,245		
April.....			30	22,736	2,985,000	757	99,500		
May.....			5	823	104,000	164	32,800		
1841.....	March 11.....	May 7.....	58	29,248	2,148,775	504	37,047	March 22-27.	April 16 and 23.
March.....			21	12,806	102,775	609	4,894		
April.....			30	16,014	1,665,000	533	55,500		
May.....			7	428	281,000	61	40,142		
1842.....	March 6.....	May 2.....	58	55,784	1,367,075	961	23,570	March 8-13.	April 21-24.
March.....			26	44,353	244,500	1,705	9,403		
April.....			30	11,373	1,105,575	379	36,852		
May.....			2	58	17,000	29	8,500		
1843.....	March 15.....	May 8.....	55	31,615	1,680,100	574	30,547	April 6-12.	April 21-28.
March.....			17	3,941	83,000	231	4,882		
April.....			30	25,894	1,293,100	863	43,103		
May.....			8	1,780	304,000	221	3,800		
1844.....	March 16.....	May 1.....	47	60,205	1,402,600	1,280	29,842	March 22-28.	April 16-22.
March.....			16	21,701	84,100	1,356	5,256		
April.....			30	38,414	1,314,500	1,280	43,816		
May.....			1	90	4,000	90	4,000		
1845.....	March 13.....	May 2.....	51	53,179	1,556,000	1,042	30,569	March 31-April 3.	April 16-20.

Summary of fishing records for shad and alewives, kept at Willow Branch Fishery, North Carolina, from 1835 to 1874—Continued.

Years and months.	Beginning of season.	Ending of season.	Number of days.	Total of shad.	Total of alewives.	Average per diem of shad.	Average per diem of alewives.	Date of maximum.	
								Shad.	Alewives.
1845.									
March			19	31, 632		1, 675			
April			30	21, 287	1, 527, 000		50, 900		
May			2	60	29, 000		14, 500		
1846.	March 15	May 1	48	33, 117	718, 650	689	14, 971	April 3-6.	April 18-23.
March			17	10, 931	95, 350	643	3, 843		
April			30	22, 112	642, 300	737	21, 410		
May			1	74	11, 000	74	11, 000		
1847.	March 15	April 29	45	21, 157	567, 140	470	12, 603	March 15-19.	April 13-18.
March			16	11, 722	100, 000	732	6, 250		
April			29	9, 435	467, 140	325	10, 109		
1848.	March 14	May 5	53	16, 912	688, 400	319	12, 988	March 31, April 10.	April 28-May 24.
March			18	6, 821	40, 200	378	2, 233		
April			30	9, 732	540, 700	324	18, 023		
May			5	359	107, 500	71	21, 500		
1849.	March 19	May 10	53	47, 017	389, 816	887	7, 355	March 24-April 3.	April 10-13.
March			15	16, 999	25, 676	1, 307	1, 975		
April			30	27, 933	314, 180	931	10, 472		
May			10	2, 085	49, 980	208	4, 998		
1850.	March 12	May 7	37	25, 882	451, 103	454	7, 954	March 15-21.	April 27-May 3.
March			20	14, 417	15, 436	720	7, 771		
April			30	11, 045	275, 967	368	9, 198		
May			7	420	159, 700	60	22, 814		
1851.	March 11	May 2	53	12, 963	428, 650	244	8, 087	March 12.	April 28.
March			21	7, 664	18, 990	364	904		
April			30	5, 196	390, 160	173	13, 005		
May			2	103	19, 500	51	9, 750		
1852.	March 8	May 14	68	34, 896	744, 428	513	10, 947	March 21-29.	April 6-24.
March			24	17, 877	59, 728	744	2, 488		
April			30	13, 820	454, 200	460	15, 140		
May			14	3, 199	230, 500	228	16, 460		
1853.	March 7	May 6	61	37, 880	559, 800	620	9, 177	March 25-31.	April 25-27.
March			25	20, 416	53, 300	816	2, 132		
April			30	16, 273	434, 500	542	14, 483		
May			6	1, 191	72, 000	198	12, 000		
1854.	March 9	May 10	63	28, 087	965, 500	445	15, 325	April 4-6.	April 22-May 2.
March			23	10, 996	34, 500	478	1, 500		
April			30	13, 370	664, 000	445	22, 133		
May			10	3, 721	267, 000	372	26, 700		
1855.	March 12	May 11	61	32, 112	1, 105, 100	526	18, 116	March 28-April 20.	April 23-May 3.
March			20	10, 132	47, 200	506	2, 360		

April			30	18,300	592,900	610	19,763		
May			11	3,680	465,000	334	42,272		
1856	March	March 17	54	22,524	419,700	417	7,772	April 10-16.	April 21-23.
March			15	4,381	23,200	292	1,546		
April			30	10,009	303,500	555	10,116		
May			9	1,474	93,000	163	10,333		
1857	March	March 12	65	28,053	569,200	431	8,756	March 25-April 9.	April 28-May 2.
March			20	8,123	28,400	406	1,420		
April			30	17,067	338,800	566	11,293		
May			15	2,923	202,000	194	13,466		
1858	March	March 15	59	16,242	245,280	275	4,157	April 3-10.	April 15-24.
March			17	5,744	12,950	337	761		
April			30	9,238	206,200	307	6,873		
May			12	1,260	26,130	105	2,177		
1859	March	March 14	48	12,002	120,700	250	2,514	March 14-17.	April 11-27.
March			18	7,692	30,000	427	666		
April			30	4,810	96,700	143	3,223		
1860	March	March 12	63	17,125	144,100	271	2,287	March 22.	April 25-27.
March			21	8,809	20,700	419	985		
April			30	6,586	83,400	219	2,446		
May			12	1,730	40,000	144	3,333		
1861	March	March 11	67	21,101	915,450	314	13,663	April 2-6.	April 23-May 3.
March			21	7,782	85,200	370	4,057		
April			30	11,468	549,500	382	14,983		
May			16	1,851	280,750	115	17,546		
1862	April	April 7	36	38,286	567,583	1,063	15,766	April 7-11.	May 5-7.
April			24	34,534	301,135	1,438	12,547		
May			12	3,752	266,448	312	22,204		
1863		No record kept.							
1864		No record kept.							
1865		No record kept.							
1866	March	March 12	55	36,599	1,589,000	665	28,890	April 10-12.	April 20-23.
March			20	14,315	217,500	715	10,875		
April			30	21,605	1,019,500	720	33,983		
May			5	679	352,000	113	58,666		
1867		No record kept.							
1868	March	March 16	61	31,551	1,144,700	517	18,765	April 13-26.	April 23-May 5.
March			16	5,095	34,700	318	2,168		
April			30	21,774	674,000	725	22,466		
May			15	4,682	436,000	312	29,066		
1869	March	March 15	62	17,647	583,950	284	9,418	April 5-9.	April 21-27.
March			17	4,041	33,950	237	1,997		
April			30	11,612	426,600	387	14,220		
May			15	1,994	123,400	132	8,226		
1870	March	March 14	60	15,009	620,530	250	10,342	April 7-14.	April 14.
March			18	3,657	11,530	203	640		
April			30	9,739	421,000	324	14,033		
May			12	1,613	188,000	134	15,666		
1871		No record kept.							
1872		No record kept.							
1873	March	March 17	55	50,195	1,650,330	912	30,006	April 7-25.	April 28-May 3.
March			15	2,797	30,670	186	2,440		

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Years and months.	Beginning of season.	Ending of season.	Number of days.	Total of shad.	Total of alewives.	Average per diem of shad.	Average per diem of alewives.	Date of maximum.	
								Shad.	Alewives.
1873.									
April			30	41,501	976,360	1,383	32,545		
May			10	5,897	643,300	589	64,330		
1874.	March 10	May 11	63	30,893	923,372	490	14,656	April 1-6.	April 22-May 5.
March			22	12,086	24,672	549	1,120		
April			30	17,049	572,300	568	19,076		
May			11	1,758	326,400	159	29,672		