

ILLINOIS NATURAL HISTORY SURVEY
 CENTER FOR AQUATIC ECOLOGY
 2000-2001 CREEL SURVEY RESULTS

2000-2001 NEWTON LAKE
 1750 ACRES
 REGION 5, DISTRICT 19

STRATIFICATION SUMMARY:

Day creel only.
 Results cover **04/09/2000 through 03/15/2001**
 Year periods stratified.
 Fishing modes (boat vs. shore) stratified.
 Day types (weekday vs. weekend/holiday) stratified.
 Day periods (morning, midday, and afternoon) stratified.

SAMPLING RATIO: 341/1023 = 33.3%

NUMBER OF INTERVIEWS: 3096

Table 1. Total fishing effort, by fishing mode and day type.

| FISHING MODE | DAYTYPE | ANGLER-HOURS | 95% CI | HOURS/ACRE | 95% CI | % EFF |
|--------------|---------|--------------|--------------------|------------|--------------|-------|
| BOAT | WEEKDAY | 30081 | 25165-34997 (16%) | 17 | 14-20 (16%) | 15% |
| | HOLIDAY | 33870 | 30464-37276 (10%) | 19 | 17-21 (10%) | 31% |
| | TOTAL | 63951 | 58190-69712 (9%) | 37 | 33-40 (9%) | 23% |
| SHORE | WEEKDAY | 5686 | 4651-6721 (18%) | 3 | 3-4 (18%) | 3% |
| | HOLIDAY | 6013 | 5211-6815 (13%) | 3 | 3-4 (13%) | 3% |
| | TOTAL | 11699 | 10389-13008 (11%) | 7 | 6-7 (11%) | 3% |
| BOAT & SHORE | WEEKDAY | 35767 | 30755-40779 (14%) | 20 | 18-23 (14%) | 13% |
| | HOLIDAY | 39883 | 36383-43382 (9%) | 23 | 21-25 (9%) | 26% |
| | TOTAL | 75650 | 69742-81557 (8%) | 43 | 40-47 (8%) | 20% |

Table 2. Total fishing harvest and harvest rates, in numbers of fish.

| # HARVESTED | 95% CI | #/HOUR | 95% CI | #/HA | #/ACRE | SPECIES |
|-------------|--------------------|--------|------------------|-------|--------|------------------|
| 26917 | 18865-34968 (30%) | .382 | .233-.532 (39%) | 38.01 | 15.38 | All species |
| | | **** | NOT RECORDED | | | Black bullhead |
| 19 | 0-78 (318%) | .000 | .000-.001 (430%) | 0.03 | 0.01 | Black crappie |
| 601 | 0-2287 (280%) | .060 | .000-.174 (188%) | 0.85 | 0.34 | Bluegill |
| 82 | 0-267 (226%) | .004 | .000-.010 (161%) | 0.12 | 0.05 | Carp |
| 13371 | 10576-16165 (21%) | .200 | .107-.292 (46%) | 18.88 | 7.64 | Channel catfish |
| | | **** | NOT RECORDED | | | Flathead catfish |
| 220 | 0-666 (202%) | .006 | .000-.027 (349%) | 0.31 | 0.13 | Green sunfish |
| 5613 | 288-10937 (95%) | .050 | .007-.092 (85%) | 7.93 | 3.21 | Gizzard shad |
| 596 | 237-955 (60%) | .003 | .002-.005 (44%) | 0.84 | 0.34 | Largemouth bass |
| 15 | 0-208 (1271%) | .001 | .000-.003 (430%) | 0.02 | 0.01 | Pumpkinseed |
| | | **** | NOT RECORDED | | | Rock bass |
| | | **** | NOT RECORDED | | | Warmouth |
| 5587 | 0-11542 (107%) | .052 | .000-.106 (103%) | 7.89 | 3.19 | White bass |
| 813 | 372-1254 (54%) | .007 | .001-.012 (84%) | 1.15 | 0.46 | White crappie |
| | | **** | NOT RECORDED | | | Yellow bullhead |

Table 3. Total fishing harvest and harvest rates, in kilograms.

| KG HARVESTED | 95% CI | KG/HOUR | 95% CI | KG/HA | AVE KG | SPECIES |
|--------------|-------------------|---------|-------------------|-------|--------|------------------|
| 7766 | 5498-10033 (29%) | .085 | .054-.115 (36%) | 10.97 | 0.289 | All species |
| | | **** | NOT RECORDED | | | Black bullhead |
| 7 | 0-38 (430%) | .000 | .000-.000 (430%) | 0.01 | 0.380 | Black crappie |
| 21 | 0-75 (250%) | .001 | .000-.003 (169%) | 0.03 | 0.036 | Bluegill |
| 46 | 0-156 (237%) | .001 | .000-.004 (255%) | 0.07 | 0.566 | Carp |
| 4566 | 3593-5539 (21%) | .060 | .030-.091 (50%) | 6.45 | 0.341 | Channel catfish |
| | | **** | NOT RECORDED | | | Flathead catfish |
| 7 | 0-16 (123%) | .000 | .000-.001 (282%) | 0.01 | 0.032 | Green sunfish |
| 61 | 9-114 (85%) | .001 | .000-.001 (89%) | 0.09 | 0.011 | Gizzard shad |
| 907 | 359-1455 (60%) | .005 | .003-.008 (46%) | 1.28 | 1.522 | Largemouth bass |
| 1 | 0-12 (1271%) | .000 | .000-.000 (1271%) | 0.00 | 0.055 | Pumpkinseed |
| | | **** | NOT RECORDED | | | Rock bass |
| | | **** | NOT RECORDED | | | Warmouth |
| 1866 | 0-4020 (115%) | .014 | .002-.026 (87%) | 2.63 | 0.334 | White bass |
| 283 | 135-432 (52%) | .002 | .001-.004 (74%) | 0.40 | 0.349 | White crappie |
| | | **** | NOT RECORDED | | | Yellow bullhead |

Table 4. Total fishing harvest and harvest rates, in pounds.

| LB HARVESTED | 95% CI | LB/HOUR | 95% CI | LB/ACRE | AVE LB | SPECIES |
|--------------|--------------------|---------|------------------|---------|--------|------------------|
| 17121 | 12122-22120 (29%) | .187 | .120-.253 (36%) | 9.78 | 0.636 | All species |
| | | **** | NOT RECORDED | **** | | Black bullhead |
| 16 | 0-66 (318%) | .000 | .000-.001 (430%) | 0.01 | 0.838 | Black crappie |
| 47 | 0-165 (250%) | .002 | .000-.006 (169%) | 0.03 | 0.078 | Bluegill |
| 102 | 0-344 (237%) | .002 | .000-.008 (255%) | 0.06 | 1.247 | Carp |
| 10066 | 7920-12212 (21%) | .133 | .067-.200 (50%) | 5.75 | 0.753 | Channel catfish |
| | | **** | NOT RECORDED | **** | | Flathead catfish |
| 15 | 0-34 (123%) | .000 | .000-.001 (282%) | 0.01 | 0.070 | Green sunfish |
| 136 | 20-251 (85%) | .001 | .000-.002 (89%) | 0.08 | 0.024 | Gizzard shad |
| 1999 | 791-3207 (60%) | .012 | .006-.017 (46%) | 1.14 | 3.355 | Largemouth bass |
| 2 | 0-25 (1271%) | .000 | .000-.000 (430%) | 0.00 | 0.122 | Pumpkinseed |
| | | **** | NOT RECORDED | **** | | Rock bass |
| | | **** | NOT RECORDED | **** | | Warmouth |
| 4113 | 0-8863 (115%) | .031 | .004-.058 (87%) | 2.35 | 0.736 | White bass |
| 625 | 298-952 (52%) | .005 | .001-.008 (74%) | 0.36 | 0.769 | White crappie |
| | | **** | NOT RECORDED | **** | | Yellow bullhead |

Table 5. Total fishing catch and catch rates, in numbers of fish.
Catch includes both harvested and released fish.

| # CAUGHT | 95% CI | #/HOUR | 95% CI | #/HA | #/ACRE | SPECIES |
|----------|---------------------|--------|-------------------|--------|--------|------------------|
| 87113 | 73185-101040 (16%) | .918 | .748-1.088 (18%) | 123.00 | 49.78 | All species |
| 10 | 0-41 (318%) | .000 | .000-.000 (318%) | 0.01 | 0.01 | Black bullhead |
| 134 | 0-297 (122%) | .002 | .000-.004 (137%) | 0.19 | 0.08 | Black crappie |
| 4080 | 2619-5542 (36%) | .107 | .000-.225 (109%) | 5.76 | 2.33 | Bluegill |
| 143 | 0-330 (131%) | .005 | .000-.011 (130%) | 0.20 | 0.08 | Carp |
| 24060 | 20174-27946 (16%) | .316 | .219-.414 (31%) | 33.97 | 13.75 | Channel catfish |
| 3 | 0-9 (223%) | .000 | .000-.000 (223%) | 0.00 | 0.00 | Flathead catfish |
| 878 | 330-1426 (62%) | .012 | .000-.028 (146%) | 1.24 | 0.50 | Green sunfish |
| 7498 | 1191-13806 (84%) | .069 | .015-.122 (78%) | 10.59 | 4.28 | Gizzard shad |
| 35437 | 28985-41888 (18%) | .279 | .234-.325 (16%) | 50.04 | 20.25 | Largemouth bass |
| 65 | 1-130 (98%) | .002 | .000-.004 (136%) | 0.09 | 0.04 | Pumpkinseed |
| 22 | 0-54 (150%) | .000 | .000-.001 (178%) | 0.03 | 0.01 | Rock bass |
| 114 | 14-214 (88%) | .001 | .000-.003 (126%) | 0.16 | 0.07 | Warmouth |
| 11929 | 5543-18314 (54%) | .106 | .026-.186 (75%) | 16.84 | 6.82 | White bass |
| 2734 | 1737-3730 (36%) | .019 | .011-.027 (40%) | 3.86 | 1.56 | White crappie |
| 7 | 0-25 (278%) | .000 | .000-.001 (318%) | 0.01 | 0.00 | Yellow bullhead |

Table 6. Total fishing catch and catch rates, in kilograms.

| KG CAUGHT | 95% CI | KG/HOUR | 95% CI | KG/HA | AVE KG | SPECIES |
|-----------|--------------------|---------|------------------|-------|--------|------------------|
| 38287 | 31752-44822 (17%) | .323 | .280-.367 (13%) | 54.06 | 0.440 | All species |
| 1 | 0-3 (318%) | .000 | .000-.000 (278%) | 0.00 | 0.074 | Black bullhead |
| 16 | 0-38 (134%) | .000 | .000-.000 (130%) | 0.02 | 0.120 | Black crappie |
| 147 | 95-199 (35%) | .003 | .001-.004 (65%) | 0.21 | 0.036 | Bluegill |
| 126 | 0-289 (129%) | .003 | .000-.006 (145%) | 0.18 | 0.886 | Carp |
| 6144 | 5046-7242 (18%) | .078 | .046-.109 (40%) | 8.68 | 0.255 | Channel catfish |
| 1 | 0-5 (223%) | .000 | .000-.000 (226%) | 0.00 | 0.526 | Flathead catfish |
| 27 | 11-43 (58%) | .000 | .000-.001 (89%) | 0.04 | 0.031 | Green sunfish |
| 92 | 15-169 (84%) | .001 | .000-.002 (93%) | 0.13 | 0.012 | Gizzard shad |
| 27614 | 22787-32440 (17%) | .208 | .175-.241 (16%) | 38.99 | 0.779 | Largemouth bass |
| 3 | 0-6 (112%) | .000 | .000-.000 (187%) | 0.00 | 0.040 | Pumpkinseed |
| 2 | 0-5 (176%) | .000 | .000-.000 (208%) | 0.00 | 0.081 | Rock bass |
| 13 | 0-28 (120%) | .000 | .000-.000 (99%) | 0.02 | 0.110 | Warmouth |
| 3395 | 1235-5556 (64%) | .025 | .012-.039 (52%) | 4.79 | 0.285 | White bass |
| 704 | 429-980 (39%) | .005 | .003-.008 (47%) | 0.99 | 0.258 | White crappie |
| 3 | 0-11 (278%) | .000 | .000-.000 (278%) | 0.00 | 0.429 | Yellow bullhead |

Table 7. Total fishing catch and catch rates, in pounds.

| LB CAUGHT | 95% CI | LB/HOUR | 95% CI | LB/ACRE | AVE LB | SPECIES |
|-----------|--------------------|---------|------------------|---------|--------|------------------|
| 84408 | 70001-98816 (17%) | .712 | .617-.808 (13%) | 48.23 | 0.969 | All species |
| 2 | 0-7 (318%) | .000 | .000-.000 (318%) | 0.00 | 0.162 | Black bullhead |
| 35 | 0-83 (134%) | .000 | .000-.001 (130%) | 0.02 | 0.265 | Black crappie |
| 323 | 208-438 (35%) | .006 | .002-.010 (65%) | 0.18 | 0.079 | Bluegill |
| 278 | 0-638 (129%) | .006 | .000-.014 (145%) | 0.16 | 1.953 | Carp |
| 13546 | 11124-15967 (18%) | .171 | .102-.241 (40%) | 7.74 | 0.563 | Channel catfish |
| 3 | 0-10 (226%) | .000 | .000-.000 (226%) | 0.00 | 1.160 | Flathead catfish |
| 60 | 25-94 (58%) | .001 | .000-.001 (89%) | 0.03 | 0.068 | Green sunfish |
| 202 | 33-372 (84%) | .002 | .000-.004 (93%) | 0.12 | 0.027 | Gizzard shad |
| 60877 | 50236-71519 (17%) | .458 | .386-.530 (16%) | 34.79 | 1.718 | Largemouth bass |
| 6 | 0-12 (112%) | .000 | .000-.000 (187%) | 0.00 | 0.089 | Pumpkinseed |
| 4 | 0-11 (176%) | .000 | .000-.000 (208%) | 0.00 | 0.178 | Rock bass |
| 28 | 0-61 (120%) | .000 | .000-.000 (99%) | 0.02 | 0.242 | Warmouth |
| 7486 | 2722-12249 (64%) | .056 | .027-.086 (52%) | 4.28 | 0.628 | White bass |
| 1553 | 945-2161 (39%) | .012 | .006-.018 (47%) | 0.89 | 0.568 | White crappie |
| 6 | 0-23 (278%) | .000 | .000-.001 (318%) | 0.00 | 0.945 | Yellow bullhead |

Table 8. Hours per completed trip and supplementary questions for all trips.

| | MEAN | 95% CI | | MIN | MAX | #SAMPLES |
|---------------------------|------|-----------|--------|-----|------|----------|
| HOURS PER COMPLETED TRIP* | | | | | | |
| BOAT | 5.5 | 5.4-5.6 | (2%) | 0.5 | 14.2 | 1525 |
| SHORE | 3.1 | 2.2-3.9 | (27%) | 0.8 | 7.2 | 17 |
| BOAT & SHORE | 5.4 | 5.3-5.6 | (2%) | 0.5 | 14.2 | 1542 |
| MILES TRAVELED | 53.0 | 50.3-55.7 | (5%) | 1 | 400 | 1607 |
| SUCCESS RATING (1-10) | 4.1 | 3.9-4.2 | (3%) | 1 | 10 | 1603 |

*1238 samples were from split interviews of completed trips.
93.2% of all 1655 interviews were completed trips.

ILLEGAL HARVEST: Clerk noted 0 out of 1655 interviews with illegal harvests.

Table 9. Frequency distribution of angler party size for all interviews.

| PARTY SIZE: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10+ |
|------------------|-----|-----|-----|----|---|---|---|---|---|-----|
| BOAT INTERVIEWS | 445 | 958 | 125 | 18 | | | 1 | | | |
| SHORE INTERVIEWS | 45 | 43 | 14 | 3 | 3 | | | | | |

Table 10. Number of interviews (and %) per species sought for all interviews.

| | | |
|---------------|-----|---|
| 105 (6.3%) | ANY | All species |
| 7 (0.4%) | BLG | Bluegill |
| 6 (0.4%) | CAP | Carp |
| 296 (17.9%) | CCF | Channel catfish |
| 50 (3.0%) | CRP | Crappie spp. |
| 3 (0.2%) | GZS | Gizzard shad |
| 1156 (69.8%) | LMB | Largemouth bass |
| 1 (0.1%) | SUN | Sunfish spp. excluding Crappie and Black Bass |
| 31 (1.9%) | WHB | White bass |

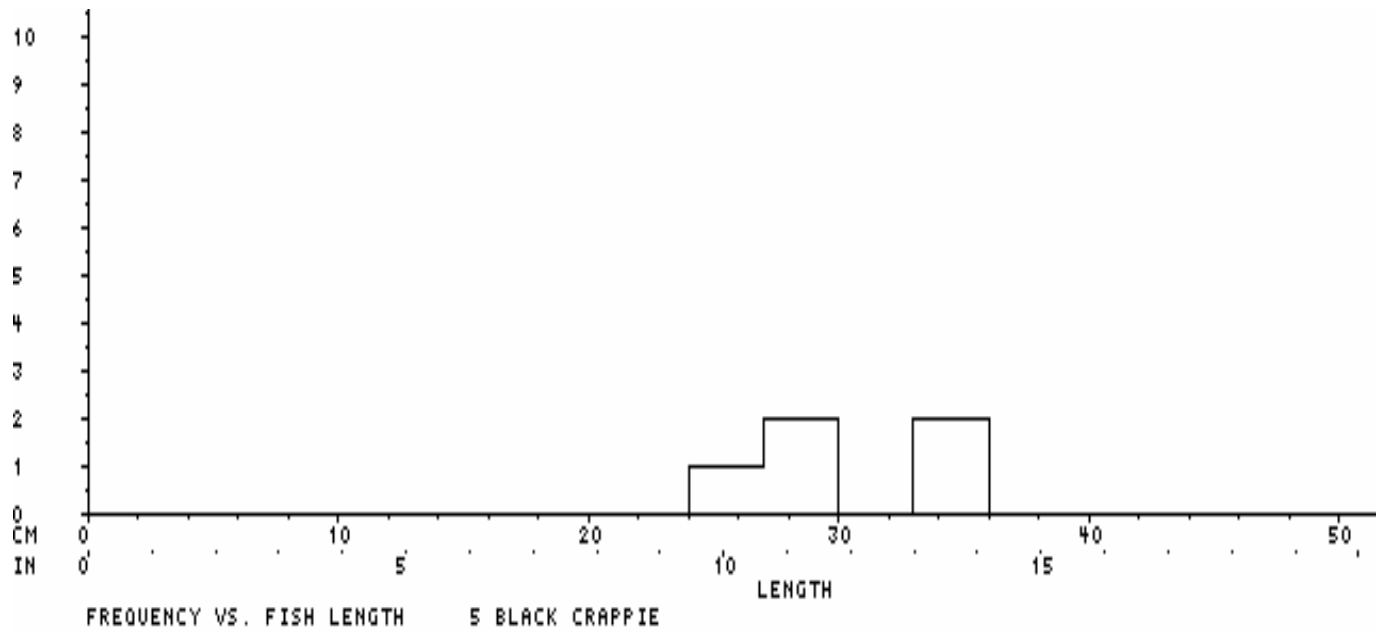


Figure 1. Newton Lake day creel 4/9/2000 through 3/15/2001. Length-frequency histogram of black crappie harvested by all anglers.

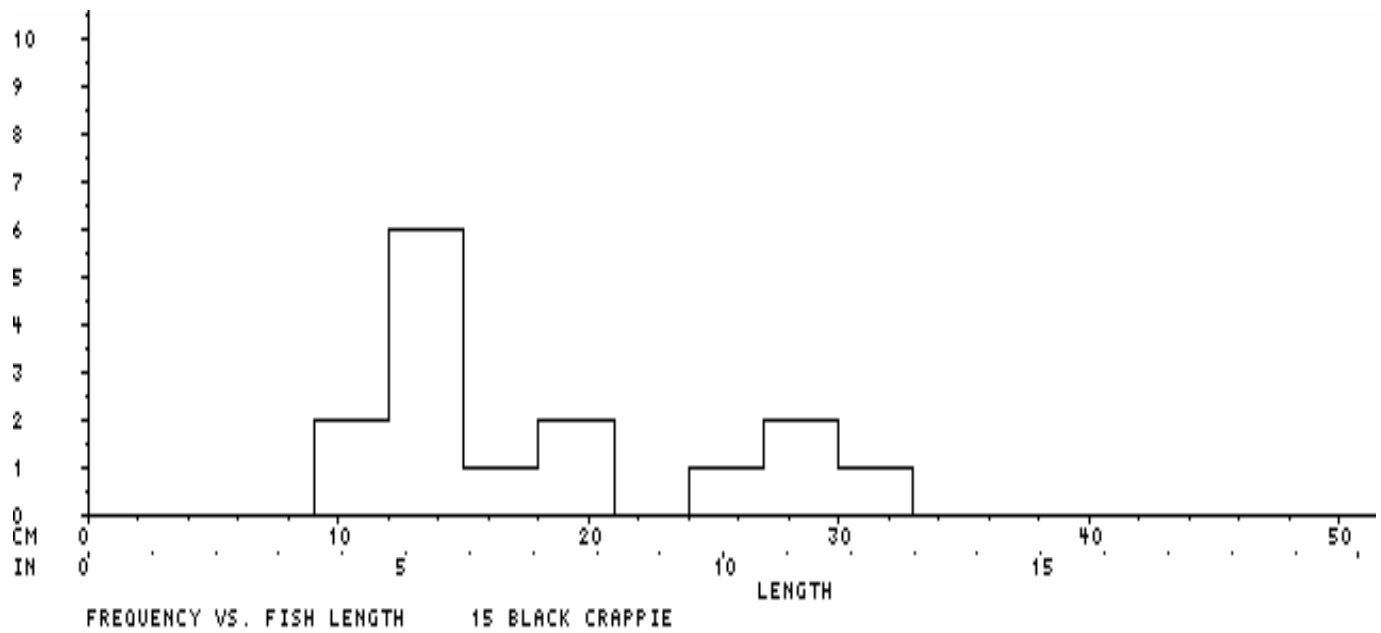


Figure 2. Newton Lake day creel 4/9/2000 through 3/15/2001. Length-frequency histogram of black crappie released by all anglers.

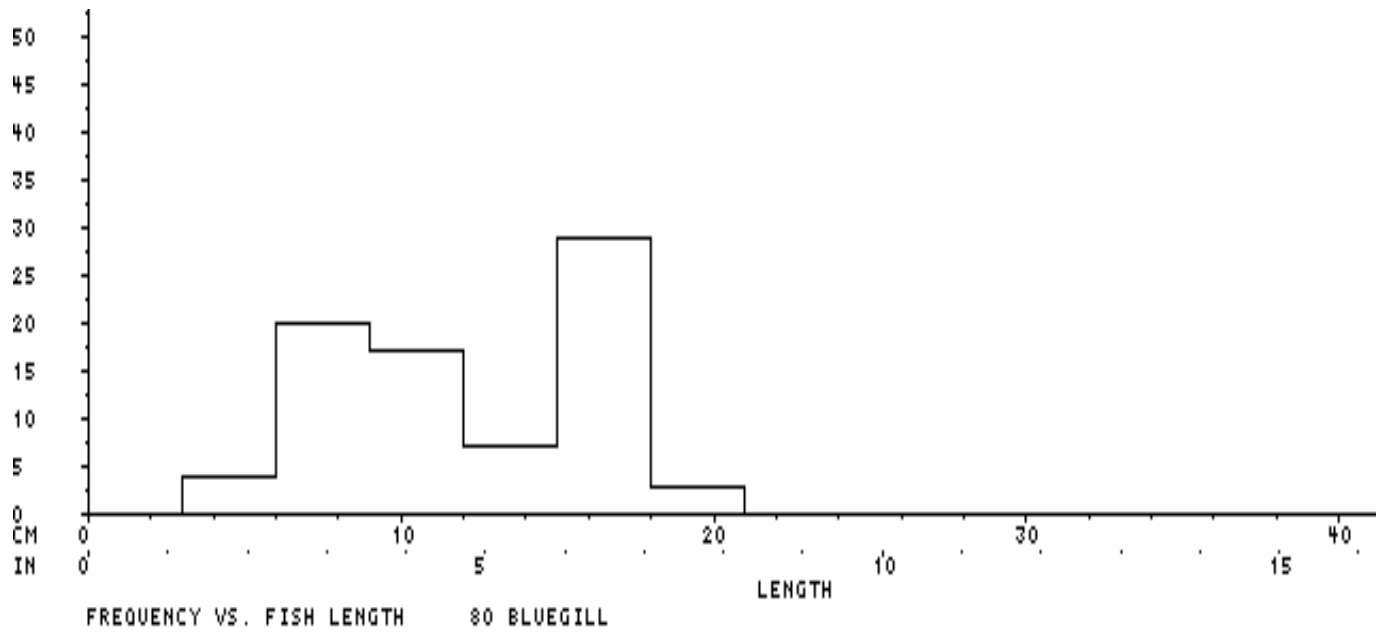


Figure 3. Newton Lake day creel 4/9/2000 through 3/15/2001. Length-frequency histogram of bluegill harvested by all anglers.

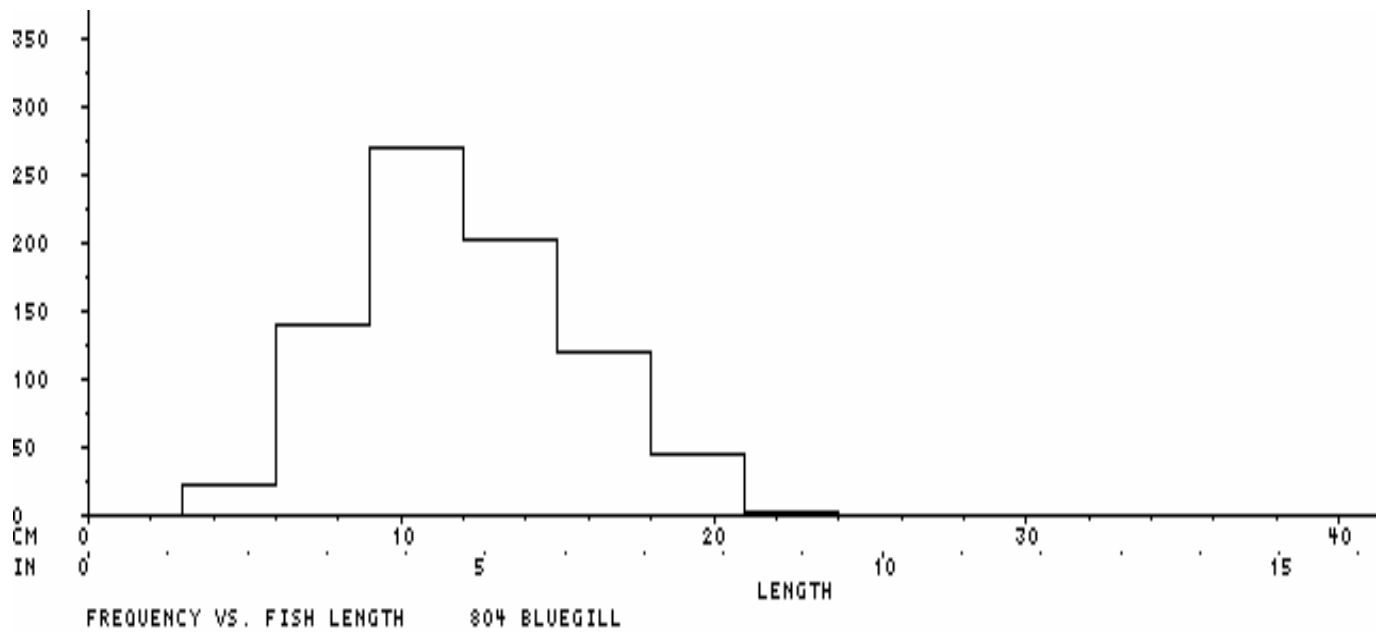


Figure 4. Newton Lake day creel 4/9/2000 through 3/15/2001. Length-frequency histogram of bluegill released by all anglers. Note the difference in scale from Figure 3.

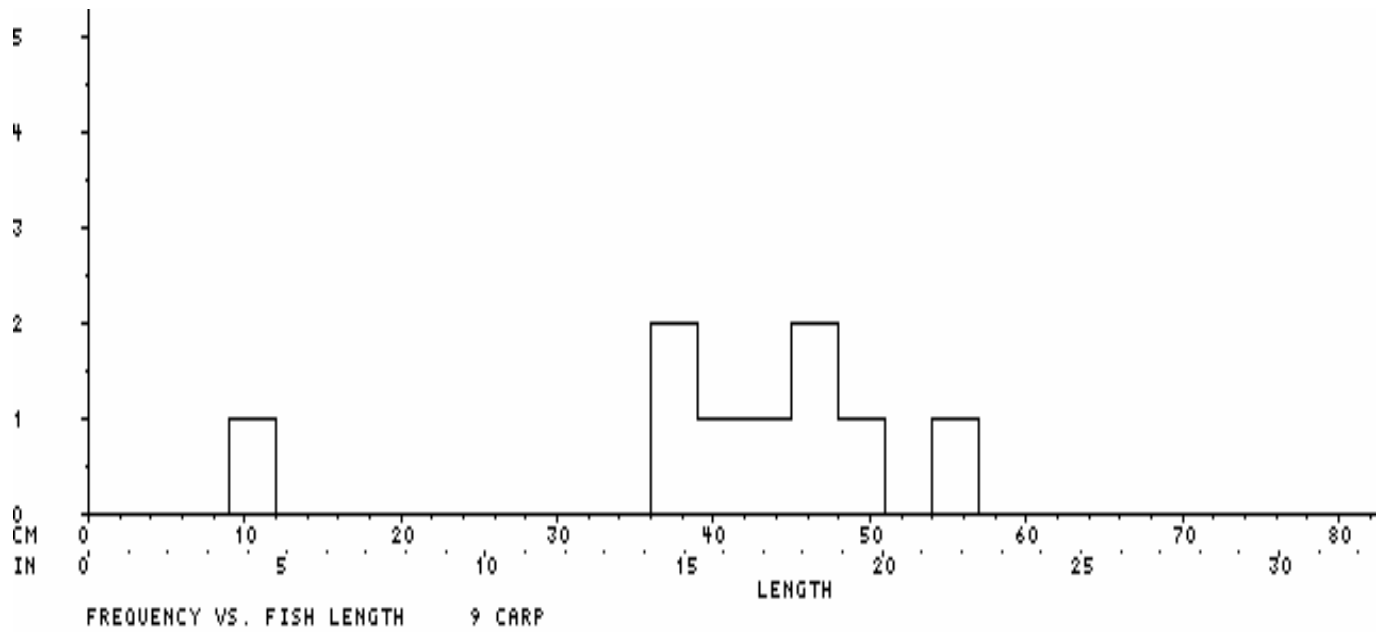


Figure 5. Newton Lake day creel 4/9/2000 through 3/15/2001. Length-frequency histogram of carp harvested by all anglers.

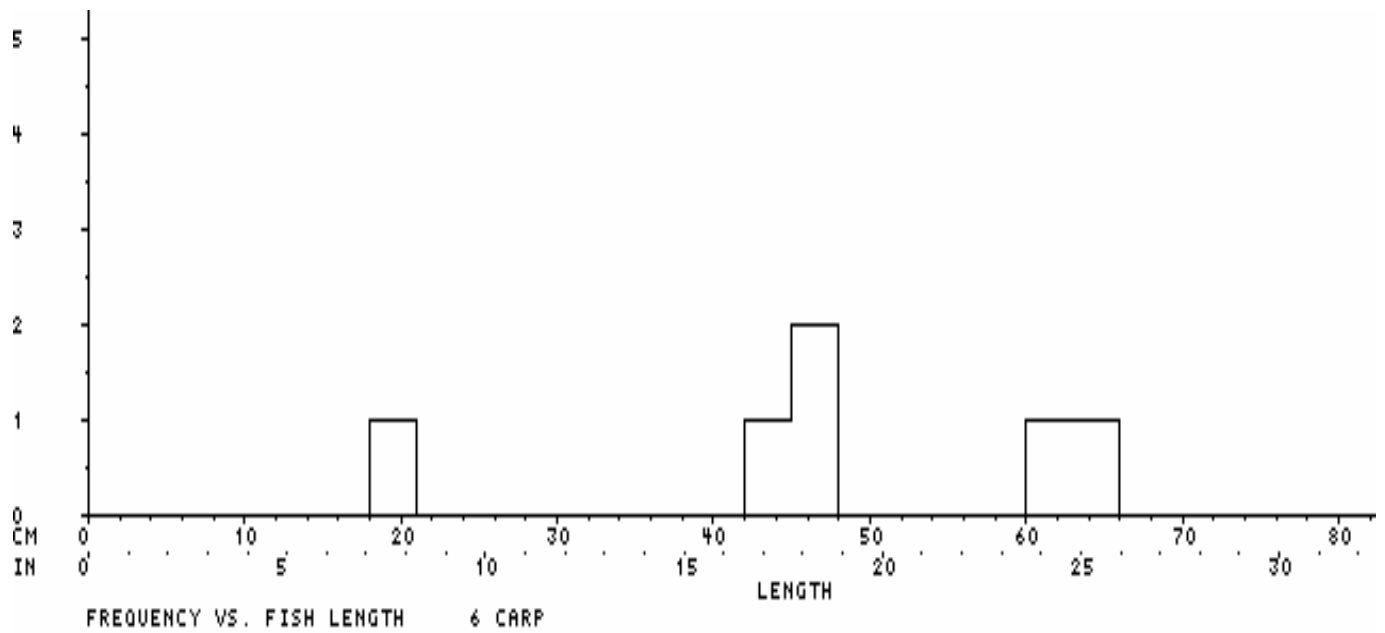


Figure 6. Newton Lake day creel 4/9/2000 through 3/15/2001. Length-frequency histogram of carp released by all anglers.

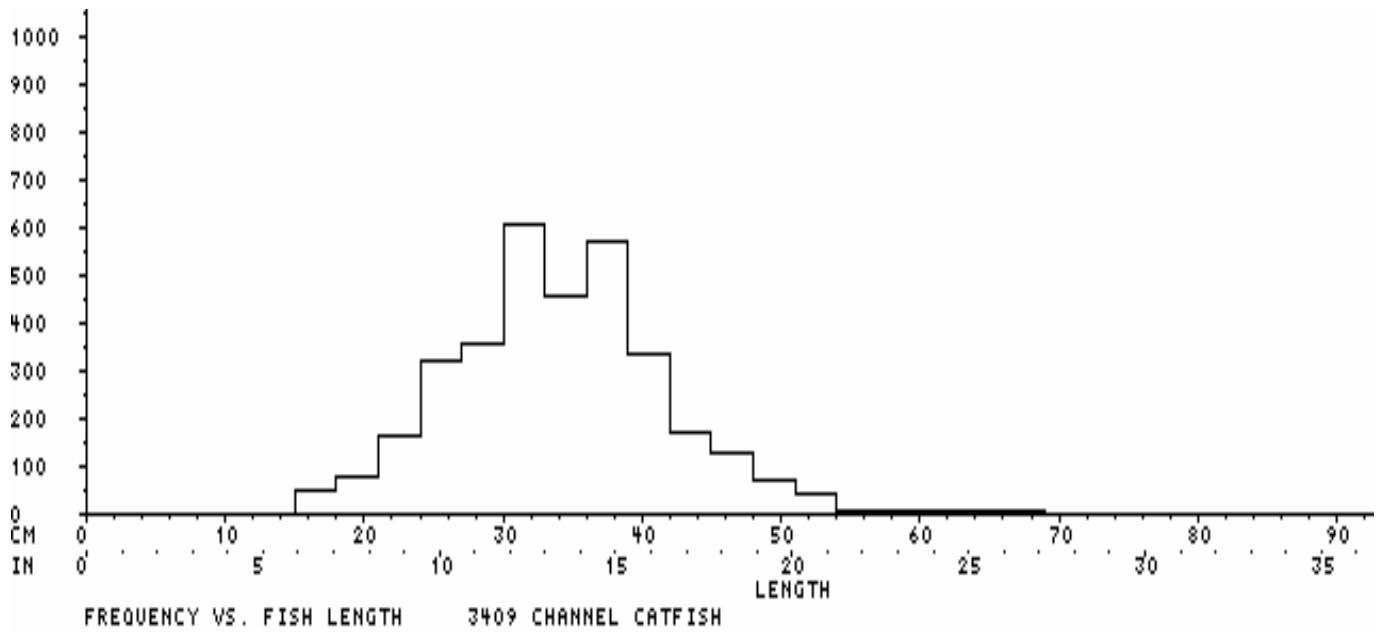


Figure 7. Newton Lake day creel 4/9/2000 through 3/15/2001. Length-frequency histogram of channel catfish harvested by all anglers.

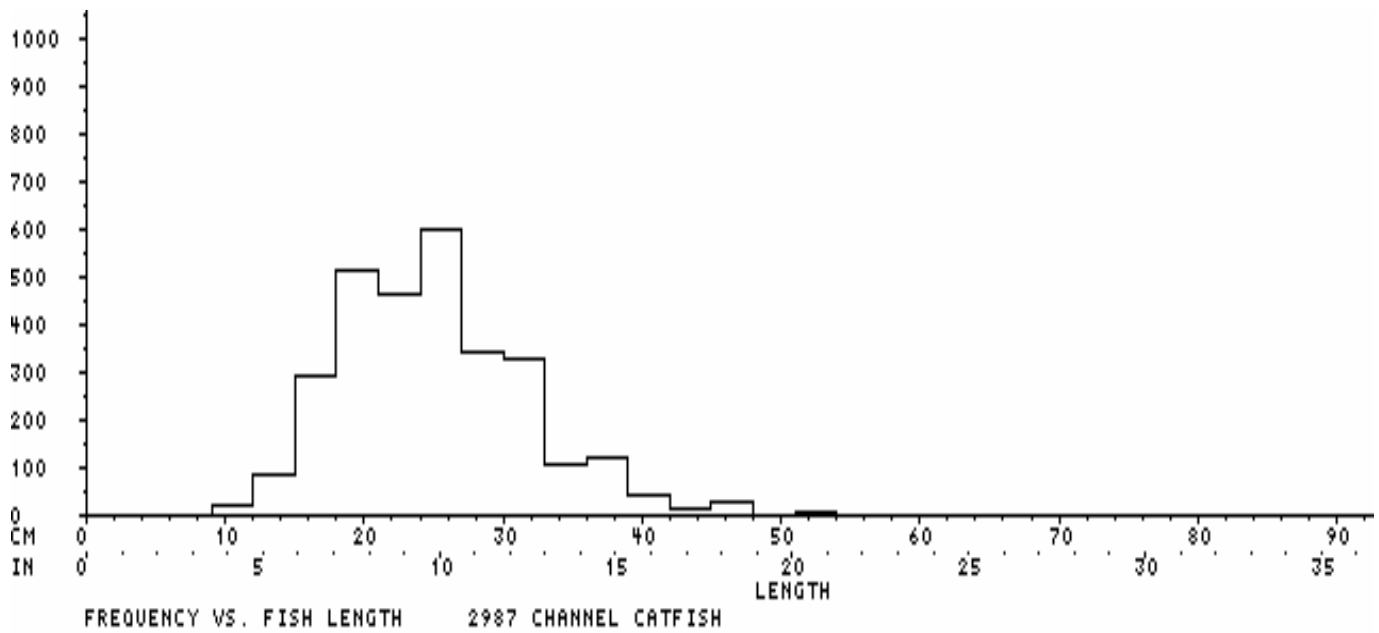


Figure 8. Newton Lake day creel 4/9/2000 through 3/15/2001. Length-frequency histogram of channel catfish released by all anglers.

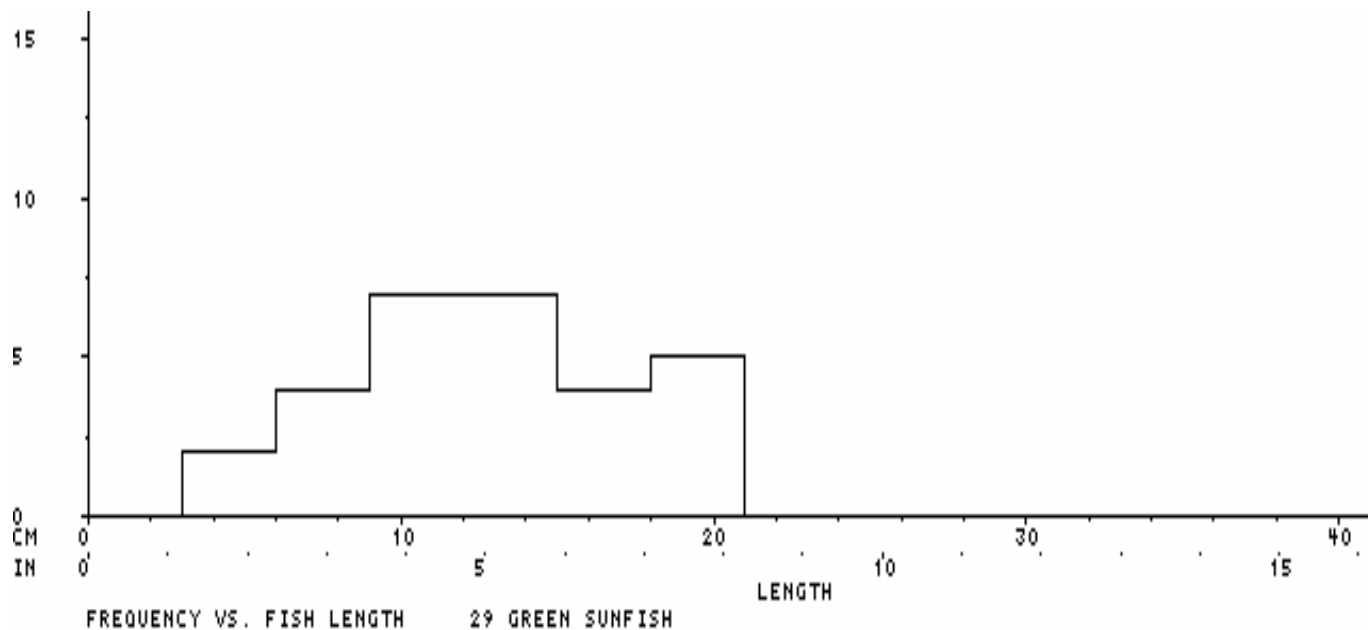


Figure 9. Newton Lake day creel 4/9/2000 through 3/15/2001. Length-frequency histogram of green sunfish harvested by all anglers.

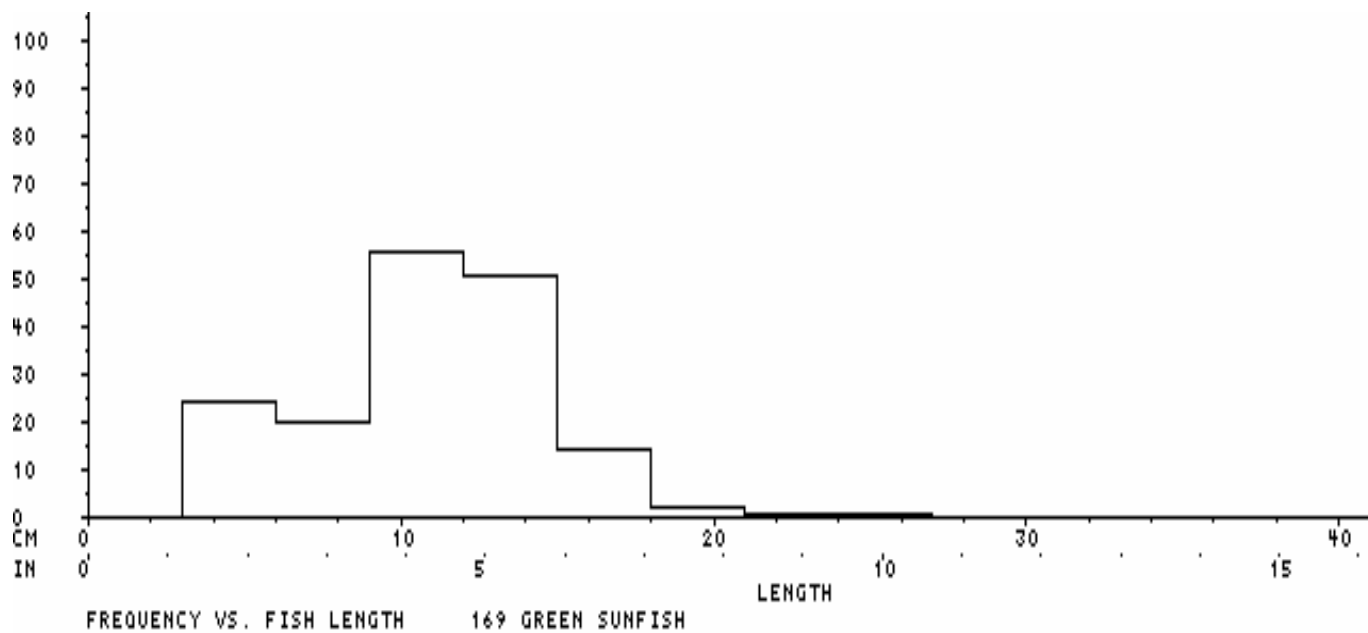


Figure 10. Newton Lake day creel 4/9/2000 through 3/15/2001. Length-frequency histogram of green sunfish released by all anglers. Note the difference in scale from Figure 9.

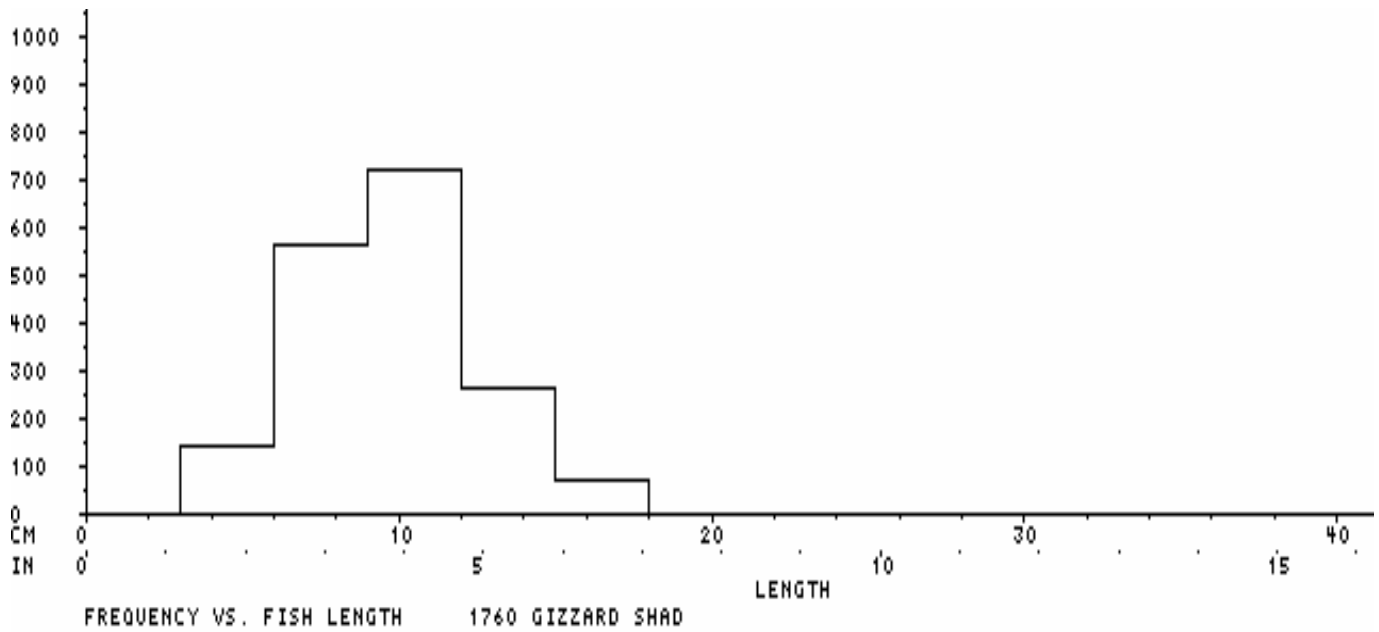


Figure 11. Newton Lake day creel 4/9/2000 through 3/15/2001. Length-frequency histogram of gizzard shad harvested by all anglers.

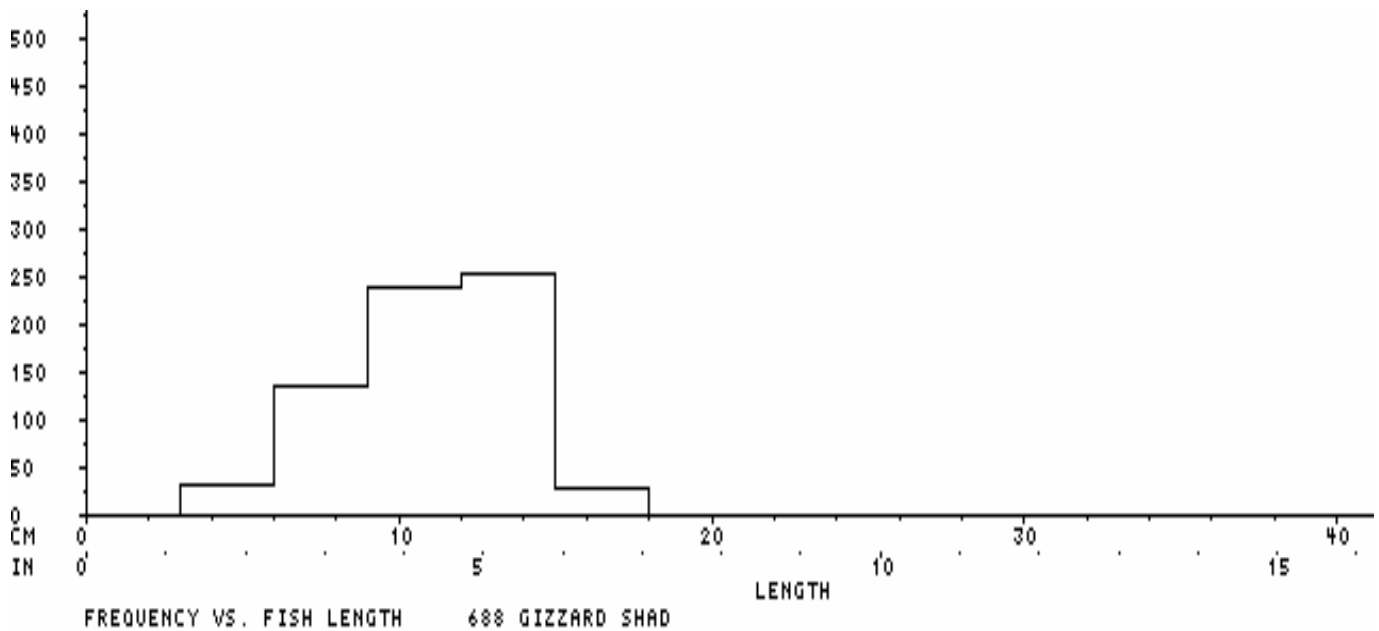


Figure 12. Newton Lake day creel 4/9/2000 through 3/15/2001. Length-frequency histogram of gizzard shad released by all anglers. Note the difference in scale from Figure 11.

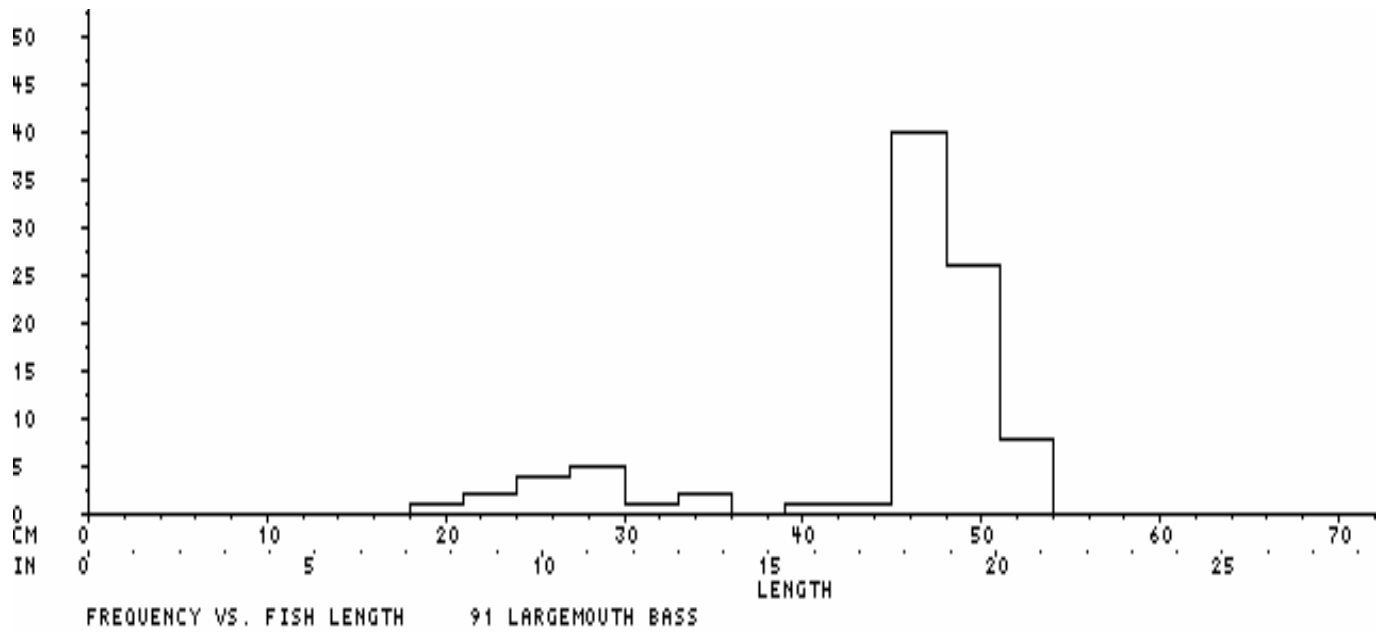


Figure 13. Newton Lake day creel 4/9/2000 through 3/15/2001. Length-frequency histogram of largemouth bass harvested by all anglers.

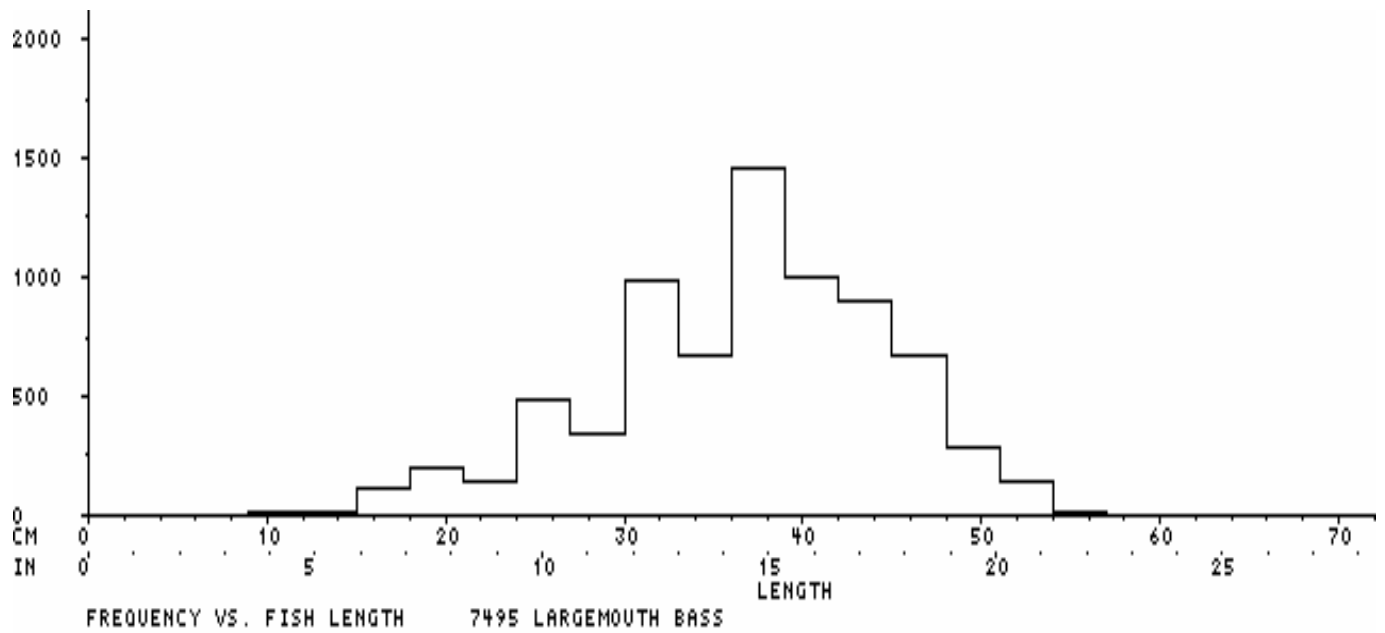


Figure 14. Newton Lake day creel 4/9/2000 through 3/15/2001. Length-frequency histogram of largemouth bass released by all anglers. Note the difference in scale from Figure 13.

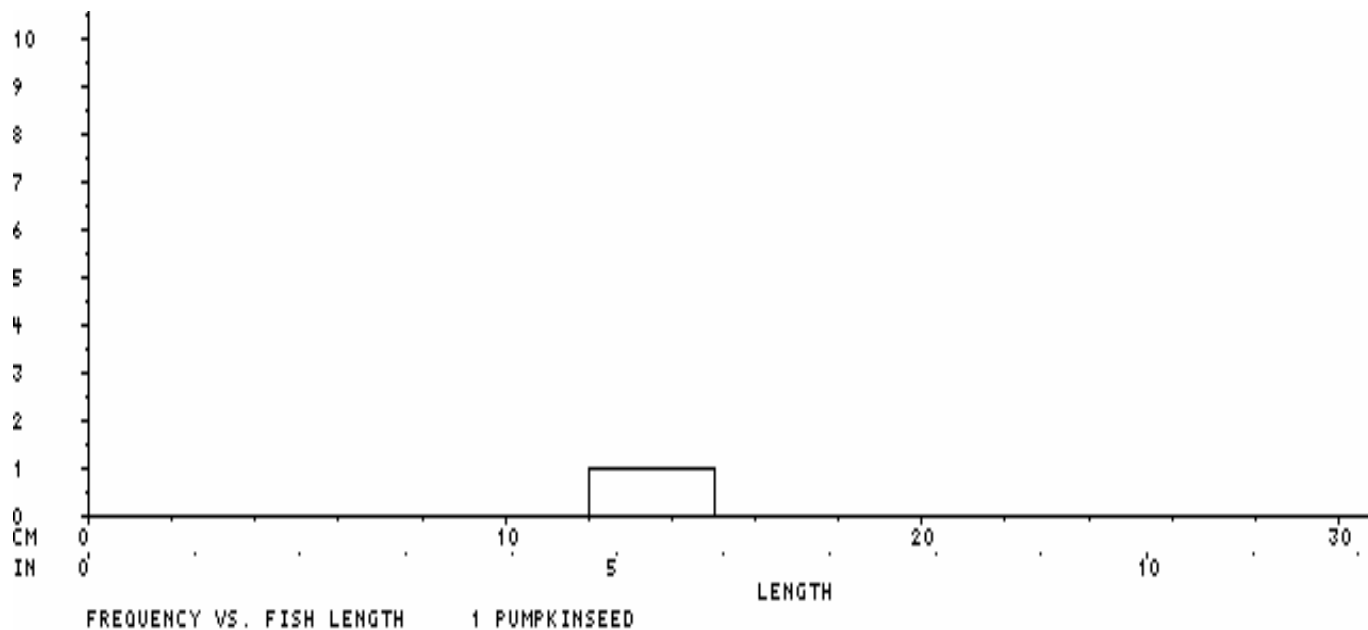


Figure 15. Newton Lake day creel 4/9/2000 through 3/15/2001. Length-frequency histogram of pumpkinseed harvested by all anglers.

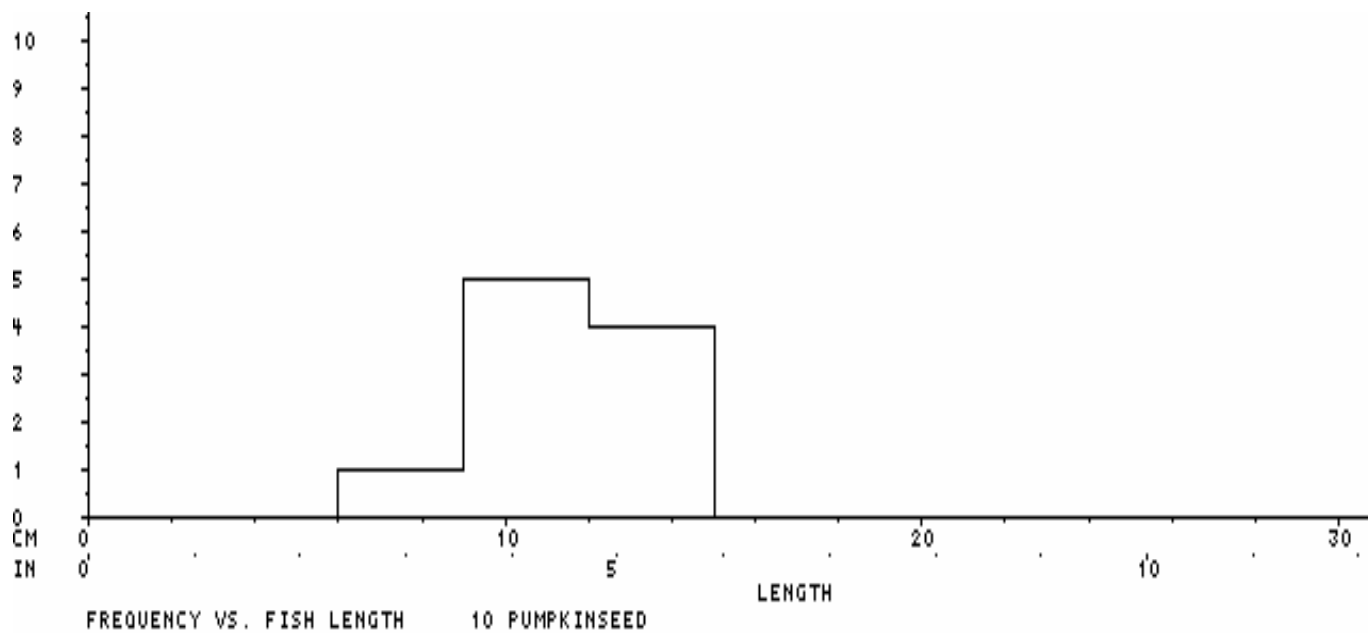


Figure 16. Newton Lake day creel 4/9/2000 through 3/15/2001. Length-frequency histogram of pumpkinseed released by all anglers.

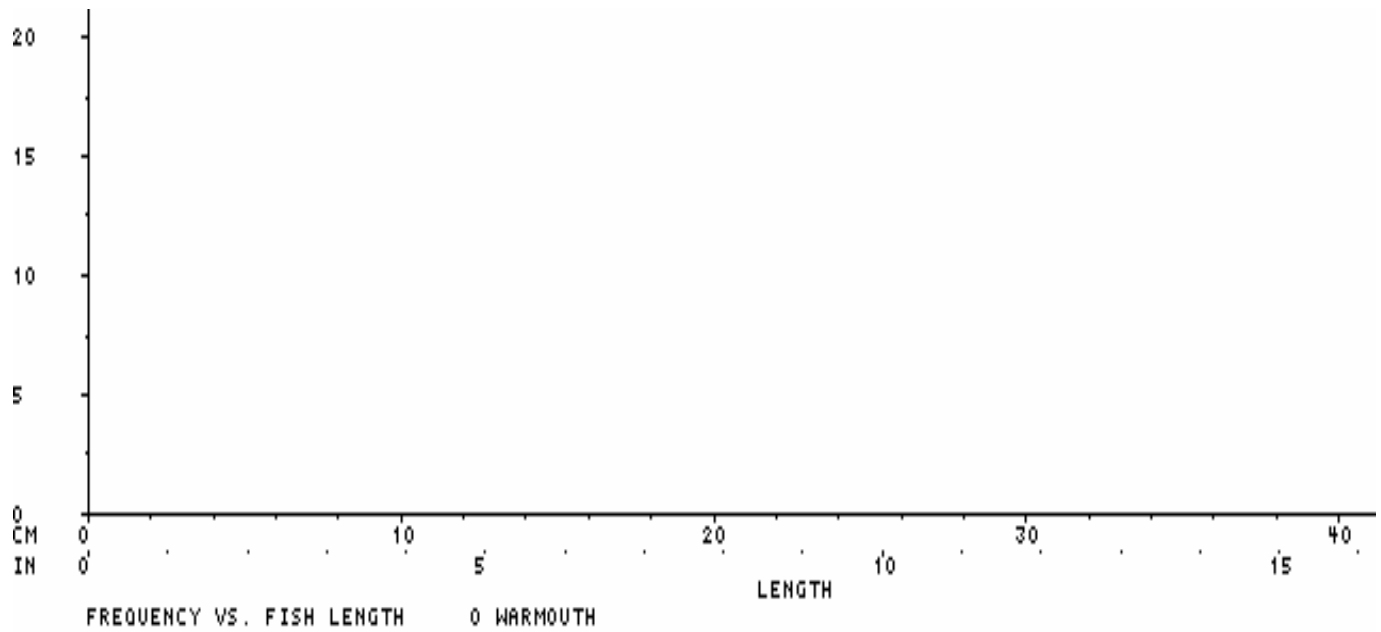


Figure 17. Newton Lake day creel 4/9/2000 through 3/15/2001. Length-frequency histogram of warmouth harvested by all anglers.

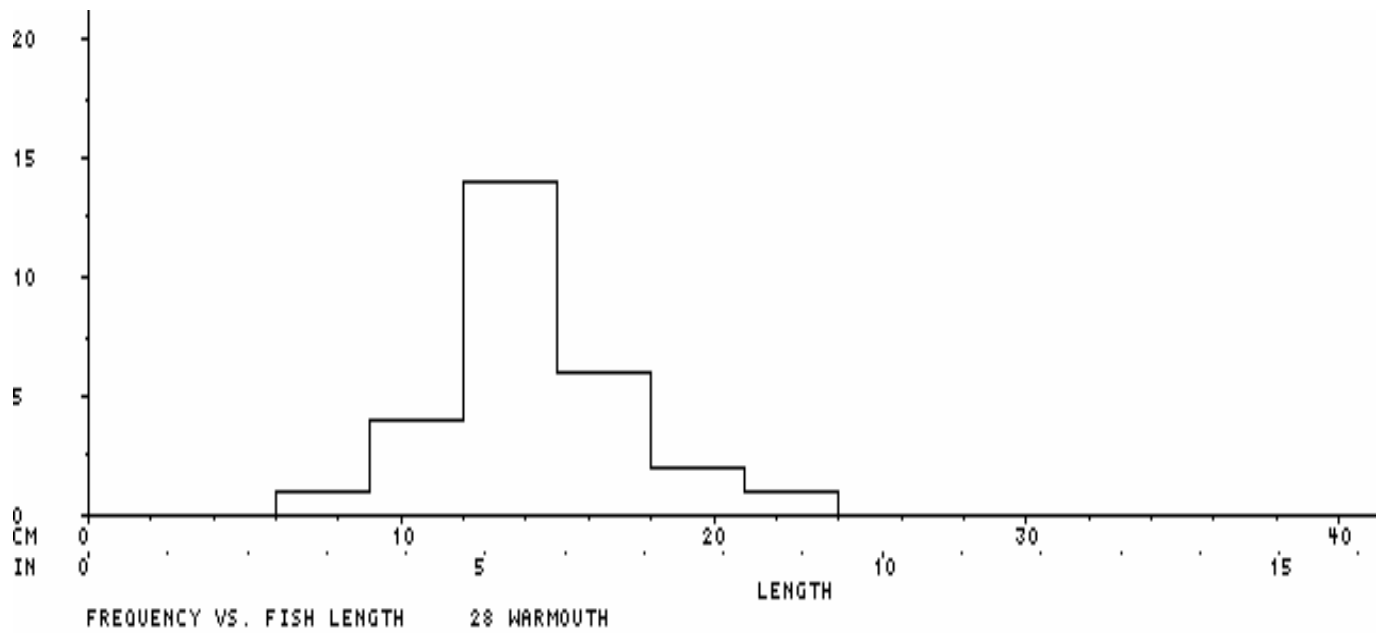


Figure 18. Newton Lake day creel 4/9/2000 through 3/15/2001. Length-frequency histogram of warmouth released by all anglers.

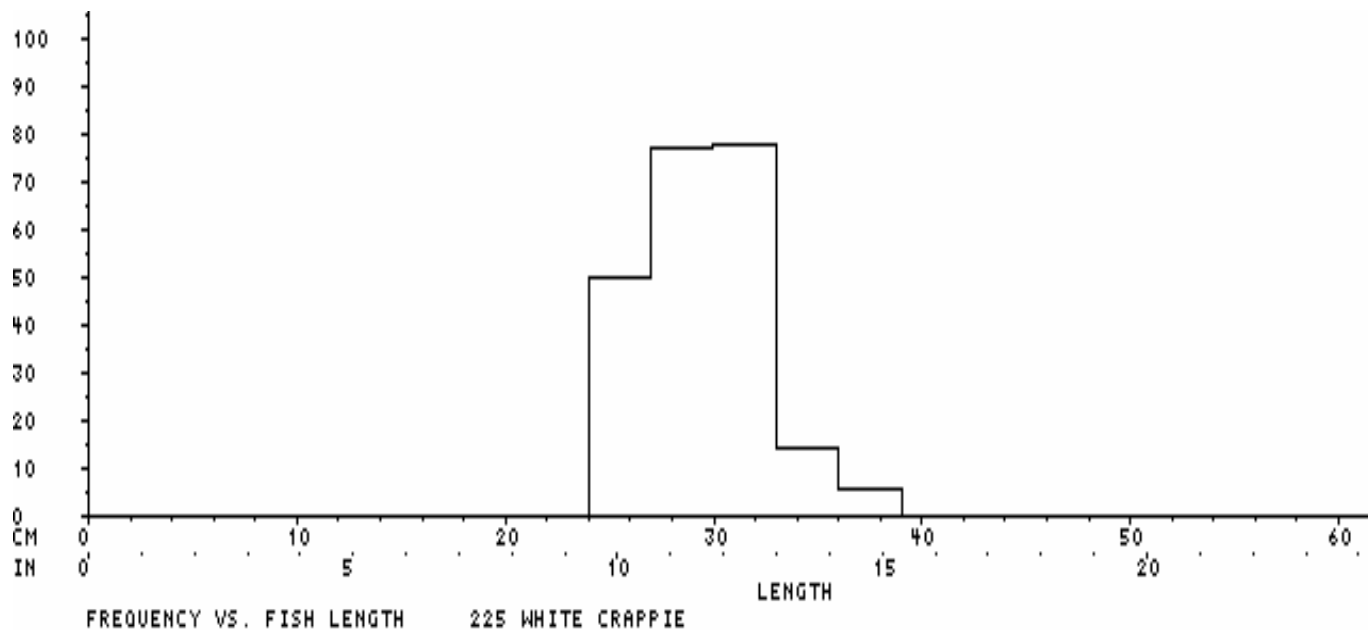


Figure 19. Newton Lake day creel 4/9/2000 through 3/15/2001. Length-frequency histogram of white crappie harvested by all anglers.

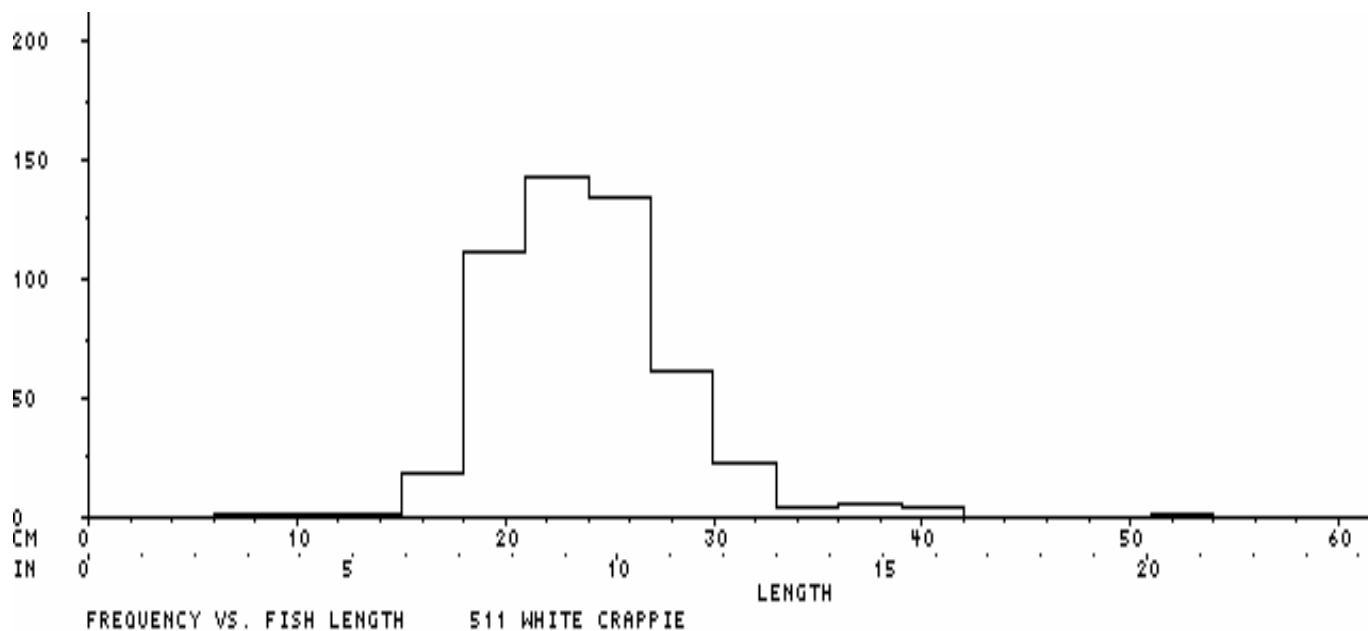


Figure 20. Newton Lake day creel 4/9/2000 through 3/15/2001. Length-frequency histogram of white crappie released by all anglers. Note the difference in scale from Figure 19.