World Record Muskie Alliance Report:
All Tackle Muskellunge Record
Freshwater Fishing Hall of Fame
69lbs, 11oz
Louis Spray, Angler
10-20-1949
Chippewa Flowage, Wisconsin, USA
Introduction

The World Record Muskie Alliance (WRMA) was formed in January of 2004, assembling a dedicated group of muskellunge anglers who felt strongly that the controversy over the legitimacy of the current All Tackle World Record Muskellunge could be resolved by the use of modern technology and unbiased methods of authentication.

Today, the WRMA is dedicated toward using modern technology and scientific methodology to:

(1) Resolve the current controversy surrounding the legitimacy of the currently accepted record muskellunge.
(2) Establish proper controls and record keeping agencies to ensure the legitimacy of all future record muskellunge.
(3) Library and disseminate scientific data regarding world record muskellunge catches.
(4) Promote and maintain trophy muskellunge fisheries throughout the species’ native range by supporting ongoing scientific efforts to determine optimal species reintroduction strategies.
(5) Protect vital spawning and nursery habit to ensure integrity of designated trophy waters.

The WRMA is a registered IRS 501 (c) (3) non-profit organization, ID #75884. Our employer ID # is 20-1741826. We are also legally registered in the state of IL, CO# 0145457.

The overwhelming focus of the sport of muskellunge fishing surrounds the pursuit of unusually large individual members of the species. Therefore, we believe the task of determining the maximum growth potential of trophy class muskellunge to be of paramount importance to the overall well-being of the sport. Our pledge is to hold each world record muskellunge to the same standard of measure by confirming the length, weight and method of capture of these historic fish.
We at the WRMA further believe that today’s stocking, length limits and research could be directly affected by the harvest of large record class fish. Therefore, by ensuring record fish are indeed as large as claimed we intend to directly benefit trophy muskellunge populations throughout North America.

The WRMA’s authentication process relied heavily upon the work of independent experts who evaluated critical photographic and taxidermic evidence relevant to the 1949 FWFHF All Tackle World Record Muskellunge (and other notable Spray claims) without bias or prejudice. All historical eye witness testimony was carefully scrutinized to determine accuracy and truthfulness of sworn statements.

The officers and trustees of the World Record Muskie Alliance include:

President, Richard Delaney;
Treasurer, Daniel Koniewicz;
Trustee, Kenneth Olesen;
Trustee, Jerry Newman.

Some notable WRMA members include:

Jack Burns, Roy Crawford, Jan Eggers, Ross Fisher, Reid Frank, Mark Gostisha, Bobby Johnson, Ken Karbon, Mike Lazarus, Pete Maina, Todd Minor, Andy Moraller, Dick Pearson, John Penny, Larry Ramsell, Jim Saric, Steve Sarley, Marc Thorpe, Jon Trent, Steve Wickens, Bruce Wisner, and Steve Worrall, to name but a few.

In sum, we at the WRMA have looked to the most qualified and unbiased professionals to produce a scientific resolution to this controversy that muskie anglers across the North American continent will be compelled to accept as simple fact.

Our hope, as always, is that this effort will provide consensus in the various recognized muskellunge records, and that the long-running record debate will finally be reasonably resolved.

We humbly ask the Muskellunge Community to please accept the following as our findings…

Richard Delaney
President, World Record Muskie Alliance
Summary Report

Photogrammetric Solution for Historic Muskie Lengths

Completed by :
Dan Mills, BTech
DCM Technical Services Inc.

Date of Report :
March 23, 2005

Completed for:
World Record Muskie Alliance
11607 Lucas Road
Woodstock, IL
60098
BACKGROUND

This report summarizes DCM Technical Services Inc’s photogrammetric evaluation of historic photographs of two different muskellunge (Muskie) fish. Three photographs (black and white) were provided of a Muskie caught in 1940 (Figures 1a to 1c). Two photographs were provided of a Muskie caught in 1949 (Figures 2a and 2b). All of these photographs had the same angler present in the photographs. Another photograph of the angler standing straight without a hat on was provided with a height measurement to enable some dimensioning of the angler to help scale the other photographs (Figure 3). The angler’s height of 71 inches was taken from a medical exam completed in 1934. Since it was unknown if the 71 inch height was with shoes on or off and to give every benefit to the angler, a subject height of 72 inches was used for the angler. With the calculation methods used, any over-estimation of the angler’s height would also represent an over-estimation of the Muskie’s dimension. DCM Technical Services Inc. was asked to determine all possible measurements relating to the fish with the provided information. Of largest importance was the length of each fish and then the width at the largest belly point.
Figure 1a – 1940 photograph (referred to as 1940 photograph 1 for the remainder of the report).
Figure 1b – 1940 photograph (referred to as 1940 photograph 2 for the remainder of the report).
Figure 1c – 1940 photograph (referred to as 1940 photograph 3 for the remainder of the report).
Figure 2a – 1949 photograph (referred to as 1949 photograph 1 for the remainder of the report).

Figure 2b – 1949 photograph (referred to as 1949 photograph 2 for the remainder of the report).
Provided for the 1940 Muskie were three photographs of the fish (Figures 1a – 1c), all held by the angler’s right hand. Parameters for the camera(s) that took the photograph were unknown. Also available for use in this analysis was the photograph of the angler without his hat on (Figure 3).

Photogrammetric Analysis

After reviewing each of the photographs it was evident that perspective was present in each photograph and direct scaling of the angler’s height would not be possible to directly determine the length of the fish in question. Perspective, as seen in photographs, makes object appear larger as they get closer to the camera and the same object will appear smaller as it gets further away from the camera. It is perspective that makes train tracks that are known to be parallel appear closer together as they get further away from the camera. In all of the available photographs the angler is standing rearward of each fish which results in the fish appearing larger on the photographs than would appear if the angler was standing beside the fish at the time of the photograph being taken. This being the case the first undertaking was to scale the fish directly off of the photographs to determine the absolute maximum length of the fish. This maximum length was an overestimation of the fish length due to the angler being behind the fish but served as a boundary check for subsequent calculations. Using this direct scaling method would not compensate for the effects of perspective. Since the angler was located further away
from the camera than the fish, the angler would appear smaller and the fish larger. If the
angler’s height was used to scale objects in the photograph, an object beside the angler
would have its scale approximated quite nearly. An object that was behind the angler
would have an underestimated size from this calculation. Conversely, an object that was
ahead of the angler (closer to the camera) would have an overestimated size from this
calculation. The amount of this overestimation would vary by how far ahead of the angler
(and closer to the camera) the fish was held, location of camera at time of exposure and to
a lesser extent variations in the internal camera parameters (focal length). Closer to the
angler would result in a calculated fish size that was overestimated a small amount and
further ahead would result in the calculated fish size being overestimated by a larger
amount. Since it can be easily seen in all of the photographs that that angler was holding
the fish at some point ahead of his body, all direct scale calculations would be an
overestimate. In Figure 1a the muskie appears to have a length that ranges from the
angler’s mid-shin to above his eyes. Similarly in Figure 1c, the muskie appears to have a
length that ranges from the angler’s mid-shin to approximately the tip of the angler’s
nose. In Figure 1b the muskie appears to have a length that ranges from the angler’s mid-
shin to above the top of his hat. This is partially due to the perspective introduced by the
angler holding the muskie in front of himself and also due to the photograph being taken
from low with an upward angle. Since all of the direct scaling measurements would be an
overestimation, the smallest calculated muskie length would also be the smallest
overestimation of the true length. Each direct scaling value that was calculated in this
manner could be discarded as a greater overestimation if a smaller length was calculated
off of a different photograph.

1940 Photograph #1 was the first photograph examined for this purpose. A measurement
of the fish was taken after scaling the photograph to the angler’s height of 72” (Figure 4).
The formula used to calculate this maximum fish length was:

Equation 1.

\[
\text{Fish length}_{\text{inches}} = \frac{\text{Fish length}_{\text{pixels}} \times \text{Angler height}_{\text{inches}}}{\text{Angler height}_{\text{pixels}}}
\]
Figure 4 – Photograph #1 scaled to angler’s height of 72 inches.

Fish length = \( \frac{(2055 \times 72)}{2488} \)
Fish length = 59.47” (scaled off of the angler’s height and an overestimation of the true muskie length)

The angler was wearing a hat at the time of this photograph being taken so an estimation of the top of his head needed to be done to determine how many photo pixels would represent his 72” height. The left red line in Figure 4 represents the dimension used to measure his height in the photograph. The top of the line was continued to a point that was felt to conservatively estimate where the top of his head could be. Once again, this is the maximum length that the fish could have been if the fish were directly beside the angler at the time that the photograph was taken. In the case of 1940 photograph #1 the angler was standing behind the Muskie and was holding it out in front of him some distance from his body. The forward positioning of the Muskie relative to the angler in this photograph indicated that the calculated length of 59.47” is in fact an overestimation and that the length of the fish was somewhat less than that. To determine the sensitivity of the
measurements due to point marking variations, the fish and angler lengths were increased and decreased by 10 pixels (and arbitrary amount but the point selection was deemed to be accurate to 10 or less pixels) and it was found that the fish length varied from 59.42” to 59.52”

1940 photograph #2 (Figure 1b) was taken with the angler holding the fish out in front of himself and with the camera angled upward towards the fish and angler. This resulted in an exaggeration of the apparent length of the fish making it look almost as long as the angler was tall. Since, due to perspective, this was visibly beyond the already calculated maximum length (59.42”) no further calculation was completed on this photograph. The muskie appeared to be longer than the distance from the angler’s mid-shin to the top of his head. The muskie can be seen to be shorter than that in the other photographs so this was visually beyond the already calculated maximum length. The muskie appearing to have a length beyond the top of the angler’s hat also made it impossible to select a top point on the angler to use for direct scaling.

1940 photograph #3 (Figure 1c and 5) was evaluated in the same manner as to determine if the maximum length of the fish was more or less than the length calculated in photograph #1. In this photograph the angler’s feet were not visible and the angler’s right leg was stepped back relative to his left leg. The angler’s right leg was not feasible for scaling due to this stepping back. The left leg was vertical and in the same approximate plane as the angler’s body making it suitable for scaling purposes. Unfortunately the pant cuff and boot were not visible on this leg. The pant cuff would have been located immediately below the lower visible portion of this photograph. Since the bottom of the photograph extended to a point immediately above the angler’s right pant cuff that was the length used for scaling in this photograph. A measurement of the angler from the lower edge of his left pant cuff to top of head was completed on photograph #1 since he was wearing the same pants and still had them cuffed at the time of photograph #1 being taken. Using this as a measurement for scaling 1940 photograph #3 was a conservative estimate and would have resulted in a slight overestimation in the length of the fish since the length from pant cuff to top of head was also being over-estimated in 1940 photograph #3. The length from the bottom of the angler’s pant cuff to the top of his head was calculated to be 66.92”. Using this value in Equation 1 the following was calculated as the maximum possible fish length.

\[
\text{Fish length} = \frac{2224 \times 66.92}{2622} \\
\text{Fish length} = 56.76\text{” (scaled off of the angler’s height and an overestimation of the true muskie length)}
\]

To reiterate, different visual perspectives between each of the photographs result in different lengths. Any amount of perspective added by holding the fish ahead of the angler’s body would result in the fish appearing longer than it actually was. This method of calculating maximum lengths from the angler’s height indicates an overestimation of the Muskie’s length in each photograph. Since each of the three photographs were of the same 1940 Muskie, the lowest calculated “maximum length” would indicate the maximum length that the Muskie could be. By process of elimination the lowest value calculated for the fish length could be considered the maximum length.
Given the conservative under-estimation of the angler’s left pant cuff the calculated result of 56.76” was an over-estimate of the maximum length of the fish. This was also less than the maximum length calculated for 1940 photograph #1 thereby making the maximum fish length at some point below 56.76”. Varying the lines measured in the photographs by 10 pixels resulted in calculated values ranging from 56.72” to 56.81” or +/- 0.05”.

Now that an upper bound had been established further calculations could be completed and verified for their correspondence to these upper boundaries. To complete this calculation 1940 photograph #1 was used and scaled using the angler’s thumb. The thumb, while a small object to use for scaling, was the only available identifiable scale at the location of the fish. Using the angler’s thumb it still direct scaling as described above but choosing his thumb puts the scale at the same distance away from the camera as the fish. Scaling the photograph at the Muskie, rather than the angler, would result in an actual measurement of the fish rather than an upper boundary as already calculated. To verify the validity and consistency of this method, an exemplar model was created using a 65.5” surrogate subject and a 48” steel ruler. Two photographs were taken of the surrogate subject (Figure 6a and 6b) standing in the approximate position of the angler in
Baseline photograph (Figure 3). The purpose of the control photographs was to measure the surrogate’s thumb in both and then use both of these thumb measurements to scale three different photographs in which the surrogate was holding the 48” steel ruler. To follow the same pattern as the method that would be utilized on the 1940 photographs, the surrogate’s left thumb was used as control because that is what was visible on the angler’s Baseline photograph. The angler’s thumb that is visible in the 1940 muskie photograph was his right one so that was what was used in the surrogate model as well.

Figure 6a – Control photograph#1 of surrogate subject.
Figure 6b – Control photograph #2 of surrogate subject.
Surrogate with ruler #1 was taken with the ruler held 6” forward from the chest. Surrogate with ruler #2 was taken with the ruler held 12” from the chest and Surrogate with ruler #3 was taken with the ruler held 15” from the chest. The control photographs were taken at a focal length of 28 mm and the Surrogate with ruler photographs were taken with at a focal length setting of 60 mm. Using Formula 1 to scale each of the three “Surrogate with ruler” photographs from the two control photographs a range of values were calculated with the lowest being 46.23” and the highest being 50.41”. The true length of the steel ruler was 48”. All of the calculated values derived from two different control photographs resulted in accuracies below +/- 3”.

Applying this same method to the 1940 photograph #1 and the angler’s Baseline photograph a length was calculated for the 1940 Muskie of 54.84”. The Baseline photograph (included as Figure 8 with the angle height and thumb measurements marked). Using Formula 1 again, a left thumb length of the angler was calculated to be 2.81”.

![Figure 8 – Baseline photograph with height and thumb length marked.](image)

\[
\text{Thumb length} = \frac{(72.5 \times 72)}{1859} \\
\text{Thumb length} = 2.81”
\]
Using that thumb length in 1940 photograph #1 the same length was marked and used for scaling on the angler’s right thumb. The angler was wearing a leather work glove on his right hand but it was a snug fitting glove and the shape of his thumb was evident through the glove.

Figure 9 – 1940 photograph #1 with thumb and fish length marked.

1940 Muskie length = (2055 x 2.81) / 105.3
1940 Muskie length = 54.84” (calculated true muskie length)

The calculated length of the 1940 Muskie was 54.84” +/- 3”. This tolerance would result in a minimum length of 51.84” and a maximum possible length of 57.84”. This is consistent with the tolerance of the maximum possible fish length that was calculated directly off of the photographs not compensating for perspective. With a total length of 54.84” the maximum width of the 1940 Muskie was 9” +/- 1”.

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1949 Muskie

Provided for the 1949 Muskie were two photographs of the fish, both hanging from a string with the angler standing behind on the left side left of the fish. Parameters for the camera(s) that took the photograph were unknown. Also available was the photograph of the angler without his hat on.

Photogrammetric Process

There was no portion of the angler’s body that was in the same plane or perspective as the hanging Muskie. The photographs were also taken from a location that was slightly below the Muskie and had the Muskie angles out of the plane normal to the camera negative. For these reasons, scaling directly off of either of the photographs was not possible. To complete these calculations PhotoModeler, a soft copy photogrammetric software package, was used. Since parameters relating to the camera’s internal geometry and film negative were unknown, an inverse camera needed to be determined for each of the photographs. Completing an inverse camera calculation is the process of using some known parameters about the object(s) seen on the photograph to help determine what the focal length of the camera was at the time of exposure (Figure 10). The focal length is the distance that the focal point (the point that all light rays travel through when entering the camera lens) is from the negative at the time of exposure.

![Figure 10a – Camera geometry](image)

Figure 10a – Camera geometry
In the case of each of these photographs, the building that was visible in the background provided these known parameters. Using lines that were seen on the bricks in the building foundation, horizontal siding and the windows located near the top of the foundation, points were marked and these lines constrained to be either on the X, Y or Z axis. Knowing parallel and perpendicular lines enables camera parameters and perspective to be determined. Using this process, it was determined that the image used for 1949 photograph #1 had the following effective camera parameters:

- focal length - 39.3844 mm
- format height – 82.1584 mm
- format width – 36.000 mm
1949 photograph #2 had the following effective camera parameters:

- focal length – 90.5000 mm
- format height – 84.4158 mm
- format width – 36.0000 mm

Since negatives were not available for either of the photographs, a scan of the photographic positives were used for this analysis. The photographic developing process involves an unpredictable amount of the cropping on two or more edge of the photographic positives. This will not affect the accuracy of the output in this case since the camera parameters are being calculated individually but it should be noted because analysis from negatives or photographs that were cropped differently would result in differing effective focal lengths and format sizes.

Once a camera and its internal parameters were calculated for each photograph common points on the Muskie, visible in each photograph, were marked and referenced as identical points. Marked and referenced points were shown in Figures 11a and 11b. Only points on the Muskie were marked in this process since the angler moved between photographs and the fish was rotated about the rope that it was hanging from. While the Muskie was rotated in the same approximate direction relative to the camera, the height that the camera was located at was changed between photographs, making a photogrammetric solution possible.
At this point the length and width proportions of the Muskie were determined but the scale was still not determined since there were no known dimensions. The angler was the only object with known dimensions that could be used for this purpose but he had moved between photographs. To get a dimension to use for scaling, a line was projected along the same surface of the Muskie up to the location that the Muskie was hung from. This was the point at which the angler’s right hand was raised above his head and on the pole that was suspending the Muskie. Another point was projected down along the same surface to the ground immediately below the Muskie. Since the Muskie was hanging from a rope attached at the same point as the angler’s right palm was located and a height of the angler’s palm above the ground could be determined, a scale distance could be determined.
Using the photograph shown in Figure 3, and a height of 72”, the angler’s arm can be seen to be 28” long from the left shoulder pivot to the palm of his hand. If you rotate that 28” length, about the shoulder pivot point, to be vertical the maximum height that the angler can reach above his head is 87”.
Using the same formula used to calculate the angler’s thumb length, the angler’s arm length was determined to be:

\[
\text{Arm length} = \frac{722 \times 72}{1859}
\]
\[
\text{Arm length} = 27.9'' \text{ (rounded to 28'')}
\]
In 1949 photograph #1, the angler is standing behind and to the left of the fish with his right hand elevated and holding the pole used to suspend the Muskie. The angler is holding it at the point where the rope suspending the Muskie is tied. Gravity dictates that this suspension point would be directly above a hanging object. It can be seen in this photograph that the angler’s right arm is bent to some degree and that he is in fact not reaching directly above his head. That would result in the palm of his hand being at some height below 87” above the ground. With a point projected directly up from the Muskie to the suspension point and the angler’s right palm and another point projected directly down to the ground below the Muskie a maximum scale was applied. This maximum scale would be 87” or the maximum height that the angler’s palm could have reached if it was directly above his head. The two points that were used for this scale are shown in Figure 11 with green “S”s. Once this scale was applied a measurement of the length of the Muskie from jaw to lower tip of tail was taken. Using a scale of 87”, the maximum length of the Muskie was found to be 56.1” +/- 1.5” (since the maximum reach of the angler and therefore the maximum project scale was 87” this is the maximum bound of the fish length). Knowing that the angler was located behind and to the right of the suspended Muskie, combined with the visually apparent bend in his right arm the actual height of 87” used for a scale was an overestimation and resulted in an overestimation of
the Muskie’s length as well. If the palm of the angler’s hand was considered to be a conservative 84” above the ground (this is a 3” reduction in the angler’s vertical reach from its 87” maximum to account for his standing location being offset from the Muskie and the visually evident bend in his arm at the elbow) the length of the Muskie is then actually measured to be 53.6” +/- 1.5”. Any further reduction in the height of the angler’s right palm would also result in a reduction in the length of the fish. The 3” reduction to 84” was considered to be very conservative estimate of the effect that the standing location and bend in his arm would have had on his maximum vertical reach. From these calculations it was determined that the actual length of the 1949 Muskie was 53.6” +/- 1.5” from lower jaw to lower tip of tail.

![Figure 1 – Length and width measurement points.](image)

The accuracy of +/- 1.5” applied to the 1949 Muskie calculations are a result of a more robust 3D calculation being completed with an inverse camera (known camera internal geometry) and two photographs than the offset method used in the 1940 Muskie length
determination. The visual information available in the 1940 Muskie photographs made it impossible to apply the same 3D calculation to the 1940 photographs. Both methods resulted in valid measurements but the 1940 Muskie length was determined to +/- 3 inches due to the measurement method and the 1949 Muskie length was more accurately determined to +/- 1.5”.

The final lengths for each of the Muskies were found to be:

1940 Muskie length – 54.8” +/- 3”
1940 Muskie width – 9” +/- 1”

1949 Muskie length – 53.6” +/- 1.5”
1949 Muskie width – 8.7” +/- 0.5”

All of the measurements were made using conservative scaling values and the base value used for the scaling was the angler’s medical report measured height with a 1” addition to account for possible shoes. The total height of the angler used for these calculations was 72”. The method of getting measurements off of the angler’s body from the photograph that he was not wearing a hat would be conservative with the standing height of 72”. The angler was standing with his feet slightly apart in the photograph and was much older at the time that the photograph was taken. Normal human physiology dictates that a person will reach their maximum height by early adulthood and then shrink slightly in height with age. Any shrinking that had results in the angler’s height between his 1934 medical examination and the photograph of him standing without a hat would have resulted in an overestimation of any other measurements taken from that photograph. Applying a 72” to the angler would also result in a slight overestimation of the measurements in any photograph that he has his head tilted in.

I trust that this answers the questions that you had had about the length and width of each of the Muskies shown in the photographs.

Dan Mills
DCM Technical Services Inc.
Summary Report

Photogrammetric Solution for Historic skin mount Muskie Lengths

Completed by:
Dan Mills, BTech
DCM Technical Services Inc.

Date of Report:
April 2, 2005

Completed for:
World Record Muskie Alliance
11607 Lucas Road
Woodstock, IL
60098
BACKGROUND

This report summarizes DCM Technical Services Inc’s photogrammetric evaluation of historic photographs of two different skin mount muskellunge (Muskie) fish. One photograph (black and white) was provided of a mounted Muskie caught in 1940 (Figure 1). Two photographs were provided of a mounted Muskie caught in 1949 (Figures 2a and 2b). In all of the provided photographs, the Muskie skin mounts were contained inside of a display box. No dimensions were provided for the box. Scale measurements were taken from the previous photogrammetric analysis of the 1940 and 1949 fresh Muskie dimensions. Details of the fresh Muskie measurement procedure were provided in a report titled, “Photogrammetric Solution for Historic Muskie Lengths” and dated March 23, 2005. The initial fresh fish report was completed and submitted, with calculated measurements, prior to receiving the skin mount images and prior to beginning this portion of the project. In the skin mount analysis DCM Technical Services Inc. was asked to determine measurements relating to the skin mount fish and compare with the fresh Muskie dimensions. It was not until the skin mount photographs were received that DCM Technical Services Inc was informed what the reported length of the two Muskies in question were.

Figure 1 – 1940 photograph (referred to as 1940 mount photograph 1 for the remainder of the report).
Figure 2a – 1949 photograph (referred to as 1949 mount photograph 1 for the remainder of the report).

Figure 2b – 1949 photograph (referred to as 1949 mount photograph 2 for the remainder of the report).
1940 Muskie

Provided for the 1940 Muskie was one photograph of the mounted fish (Figures 1) contained in a display box. Parameters for the camera(s) that took the photograph were unknown.

Photogrammetric Analysis

While the internal camera parameters at the time of the film exposure were unknown, there was sufficient information present in the photograph to derive the focal length. To complete this calculation, an inverse camera needed to be determined for the photograph. Completing an inverse camera calculation is the process of using some known parameters about the object(s) seen on the photograph to help determine what the focal length of the camera was at the time of exposure (Figure 3). The focal length is the distance that the focal point (the point that all light rays travel through when entering the camera lens) is from the negative at the time of exposure.

![Figure 3 – Camera geometry](image)

In 1940 mount photograph 1, the display box and other visible straight lines were used to complete focal length calculation and to orient the camera at the time of film exposure. PhotoModeler Pro Version 5 was used to complete this photogrammetric analysis. Using these straight lines, points were marked and these lines constrained to be either on the X, Y or Z axis. Knowing parallel and perpendicular lines enables camera parameters and perspective to be determined. Using this process, it was determined that the effective camera parameters at the time of exposure were:

- focal length - 79.1325 mm
- format height – 24.3692 mm
- format width – 36.0000 mm
- marked points largest residual - 4.75 pixels
Since negatives were not available for the photograph, a scan of the photographic positive was used for this analysis. The photographic developing process involves an unpredictable amount of the cropping on two or more edges of the photographic positives. This will not affect the accuracy of the output in this case since the camera parameters are being calculated individually but it should be noted because future analysis from negatives or photographs that were cropped differently would result in differing effective focal lengths. The mathematic formulae that are used to derive the internal geometry of a camera in this manner also require one parameter to be held static and all of the other calculations built around it. In all instances the one static value was a format width of 36.0000 mm.

Once the camera position and its internal parameters were calculated for 1940 mount photograph 1, enough information was available to complete a photogrammetric solution for the skin mount Muskie profile. In this instance, only 1 photograph of the Muskie was available so a 3-dimensional photogrammetric solution was not possible. Given that the Muskie was mounted in the box and parallel to the rear surface of the box it was possible to create a surface across the back of the box and then trace the profile of the Muskie on that surface. Given that the muskie was slightly ahead of the back of the box the true muskie profile would be slightly smaller that the tracing on the back of the box. Completing this allowed the minimal visual perspective that was present on the Muskie to be effectively removed. Once the outline of the Muskie was marked, a proportionally correct perimeter had been created. A scale still needed to be incorporated to define the size of the Muskie. Dimensions of the 1940 fresh Muskie were known from the initial photogrammetric project. With a lack of known dimensions in the 1940 mount photograph 1, the 1940 fresh Muskie was the best source of scale. In the process of creating a skin mount of the Muskie any portion of the body dimensions were subject to movement and not appropriate to use for scale. The head stays unmodified, save flaring of the gills, so a dimension taken from this portion of the Muskie would be consistent between the 1940 fresh and skin mount Muskie. The distance from the leading edge of the lower jaw, back to the edge of the jaw bone visible under the skin was measured to be 7.78” on the 1940 fresh Muskie. The distance from the tip of the fresh Muskie’s snout to its left eye was also measured to be 5.65” on the 1940 fresh Muskie. These points were identifiable on the 1940 skin mount Muskie as well and are shown in the Figure 4. Both measurements were used to compare results on the overall scaling of the 1940 skin mount. Results of both scaling methods are presented in Table 1a and 1b. The scale measurements were taken from the 1940 fresh Muskie and then applied in the 1940 skin mount Muskie calculations (Figure 4). While some amount of foreshortening could be present at the head of the 1940 fresh Muskie due to the fish and the camera plane not being normal to each other, this was the best scaling method available to correlate the fresh and skin mounts. Any foreshortening that was present on the scale measurements would have resulted in slightly reducing the calculated overall length of the skin mount.
The results of the photogrammetric solution for the 1940 skin mount Muskie are shown in Figure 5a. A visual comparison of the 1940 fresh and skin mount Muskie is included in Figure 5b.
Measurements taken from the 1940 fresh and 1940 skin mount Muskies resulted in the following:
In the 1940 fresh Muskie photogrammetric solution there was a tolerance of +/- 3” for the length of the Muskie and +/- 1” for the belly width. Using the calculated fresh Muskie dimensions as well as the maximum and minimum dimensions, a range of sizes needed to be compared to determine the range of differences between the 1940 fresh and skin mount Muskie. The first comparison was that of the actual calculated results presented in the 1940 fresh Muskie photogrammetric project. This was a direct comparison of the 1940 fresh Muskie and 1940 mounted Muskie dimensions.

Calculated size (scaled from the lower jaw)

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<th>Mount 1</th>
<th>Fresh</th>
<th>% difference of mount 1</th>
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<tr>
<td>A - Overall length</td>
<td>59.72</td>
<td>54.84</td>
<td>8.17</td>
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<tr>
<td>B – Belly width</td>
<td>11.43</td>
<td>9</td>
<td>21.29</td>
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<td>C - Tail width</td>
<td>3.98</td>
<td>3.43</td>
<td>13.76</td>
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Table 1a.

Calculated size (scaled from left eye to tip of snout)

<table>
<thead>
<tr>
<th></th>
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<td>A - Overall length</td>
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<td>8.46</td>
</tr>
<tr>
<td>B – Belly width</td>
<td>11.47</td>
<td>9</td>
<td>21.53</td>
</tr>
<tr>
<td>C - Tail width</td>
<td>3.99</td>
<td>3.43</td>
<td>14.04</td>
</tr>
</tbody>
</table>

Table 1b.

The overall calculated length of the 1940 skin mount Muskie was 59.72” with a tolerance of +/- 1.5”. The belly width was calculated to be 11.43” with a +/- 0.5” tolerance. This resulted in an 8.17% increase in length of the 1940 skin mount Muskie relative to the 1940 fresh Muskie. The belly width of the 1940 skin mount Muskie had a 21.29% increase relative to the 1940 fresh Muskie. There was a strong correlation between the lower jaw and left eye scaling results on both of the 1940 skin mount Muskies. Slight
variations in the scaling results could be the result of offset placement of the eye during
the mounting process and as such, the lower jaw measurements were considered to be the
more accurate dimension to be used for scaling. Overall the 1940 skin mount Muskie was
substantially larger in all directions than it was in the 1940 fresh mount photographs.

To determine the maximum and minimum % difference in dimensions between the fresh
and mounted 1940 Muskie, the upper and lower bounds of the 1940 fresh Muskie
dimensions were also compared with the 1940 skin mount dimensions.

<table>
<thead>
<tr>
<th>Lower range (scaled from the lower jaw)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>A - Overall length</td>
</tr>
<tr>
<td>B - Belly width</td>
</tr>
<tr>
<td>C - Tail width</td>
</tr>
</tbody>
</table>

Table 2a.

<table>
<thead>
<tr>
<th>Lower range (scaled from left eye to tip of snout)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>A - Overall length</td>
</tr>
<tr>
<td>B - Belly width</td>
</tr>
<tr>
<td>C - Tail width</td>
</tr>
</tbody>
</table>

Table 2b.

<table>
<thead>
<tr>
<th>Upper range (scaled from the lower jaw)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>A - Overall length</td>
</tr>
<tr>
<td>B - Belly width</td>
</tr>
<tr>
<td>C - Tail width</td>
</tr>
</tbody>
</table>

Table 3a.

<table>
<thead>
<tr>
<th>Upper range (scaled from the left eye to tip of snout)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>A – Overall length</td>
</tr>
<tr>
<td>B – Belly width</td>
</tr>
<tr>
<td>C – Tail width</td>
</tr>
</tbody>
</table>

Table 3b.

It should be noted that the values included in Tables 2a, 2b and Tables 3a, 3b are a
comparison of the Muskie dimensions at the extremes of the tolerances. Tables 2a and 2b
would result if the 1940 fresh Muskie were at the upper end of the measurement tolerance
at the same time as the 1940 skin mount Muskie were at the lower end of the
measurement tolerance. Tables 3a and 3b would result if the 1940 fresh Muskie were at
the lower end of the measurement tolerance at the same time as the 1940 skin mount
Muskie were at the upper end of the measurement tolerance. The results presented in
Tables 1a and 1b (specifically 1a due to the lower jaw scaling) are the calculated results
for both the 1940 fresh and skin mount Muskie and represent the best solution for the size
comparison.
1949 Muskie

Provided for the 1949 Muskie were two photographs of the mounted fish (Figures 2a and 2b) contained in a display box. Parameters for the cameras that took the photographs were unknown.

Photogrammetric Analysis

While the internal camera parameters at the time of the film exposure were unknown, there was sufficient information present in the photograph to derive the focal length. To complete this calculation, an inverse camera needed to be determined for the photographs.

In 1949 mount photograph 1 and 1949 mount photograph 2, the display box and other visible straight lines were used to complete focal length calculations and to orient the cameras at the time of film exposure. PhotoModeler Pro Version 5 was used to complete this photogrammetric analysis. Using these straight lines, points were marked and these lines constrained to be either on the X, Y or Z axis. Knowing parallel and perpendicular lines enables camera parameters and perspective to be determined. Using this process, it was determined that the camera had the following effective parameters at the time of exposure for the 1949 mount photograph 1:

- focal length - 75.1560 mm
- format height – 24.9231 mm
- format width – 36.0000 mm
- marked points largest residual - 3.72 pixels

The camera used for the 1949 mount photograph 2 had the following effective parameters at the time of exposure:

- focal length - 53.7027 mm
- format height – 30.6409 mm
- format width – 36.0000 mm
- marked points largest residual - 6.36 pixels

Since negatives were not available for the photographs, scans of the photographic positives were used for this analysis. As stated with the 1940 photo analysis, there are variations in the developing and scanning process as well as a constant measurement along the format width could result in these camera parameters being slightly different from the full format parameters of the images and the calculated values were the effective values at the time of exposure.

Once the camera positions and its internal parameters were calculated for 1949 mount photograph 1 and 1949 mount photograph 2, enough information was available to complete a photogrammetric solution for the skin mount Muskie profile. In this instance, even though two photographs of the Muskie were available a 3-dimensional photogrammetric solution was not possible. This was due to the extremely low camera
angle difference between two camera locations at the time of exposure. Given that the Muskie was mounted in the box and parallel to the rear surface of the box it was possible to create a surface across the back of the box and then trace the profile of the Muskie on that surface. Completing this allowed the minimal visual perspective that was present on the Muskie to be removed. Having two photographs that were suitable for this method of measurement allowed for two separate models to be created and compared. Once the outline of the Muskie was marked, a proportionally correct perimeter had been created. A scale still needed to be incorporated to define the size of the Muskie. As with the 1940 Muskie, a lack of known dimensions in the 1949 mount photograph 1 and 1949 mount photograph 2, the 1949 fresh Muskie was the best source of scale. Following the scaling method used for the 1940 skin mount, the distance from the leading edge of the lower jaw, back to the edge of the jaw bone visible under the skin was measured to be 7.56” on the 1949 fresh Muskie. The distance from the tip of the fresh Muskie’s snout to its left eye was also measured to be 5.11” on the 1949 fresh Muskie. These points were identifiable on the 1949 skin mount Muskies as well and are shown in the Figures 7a and 7b. Both measurements were used to compare results on the overall scaling of the 1949 skin mount.

The point marked for use in the photogrammetric solution for the 1949 skin mount Muskie are also shown in Figure 7a and 7b. A visual comparison of the two photogrammetric results for the 1949 skin mount Muskie is shown in Figure 8. The blue profile was of the 1949 mount photograph 1 solution and the grey profile was of the 1949 mount photograph 2. A visual comparison of the 1949 fresh and skin mount Muskies is included in Figure 9.
Figure 7a – 1949 mount photograph 1 with marked points and scale.

Figure 7b – 1949 mount photograph 2 with marked points.
Figure 8 – Comparison of photogrammetric solutions for 1949 skin mount Muskie.

Figure 9 - 1940 skin mount Muskie photogrammetric solution.

Measurements taken from the 1949 fresh and two 1949 skin mount Muskies solutions resulted in the following:

Figure 10a – Locations of measurements on the 1949 fresh and skin mount Muskie 1.
Figure 10b – Locations of measurements on the 1949 fresh and skin mount Muskie 2.

In the 1949 fresh Muskie photogrammetric solution there was a tolerance of +/- 1.5” for the length of the Muskie and +/- 0.5” for the belly width. Using the calculated fresh Muskie dimensions as well as the maximum and minimum dimensions, a range of sizes needed to be compared to determine the range of differences between the 1949 fresh and two skin mount Muskie solutions. The first comparison was that of the actual calculated results presented in the 1949 fresh Muskie photogrammetric project. This was a direct comparison of the 1949 fresh Muskie and two 1949 mounted Muskie dimensions.

**Calculated size (when scaled from the lower jaw)**

<table>
<thead>
<tr>
<th></th>
<th>Mount 1</th>
<th>Mount 2</th>
<th>Fresh</th>
<th>% difference of mount 1</th>
<th>% difference of mount 2</th>
<th>Average difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - Overall length</td>
<td>62.36</td>
<td>62.97</td>
<td>53.60</td>
<td>14.05</td>
<td>14.89</td>
<td>14.47</td>
</tr>
<tr>
<td>B - Belly width</td>
<td>9.51</td>
<td>9.51</td>
<td>8.70</td>
<td>8.51</td>
<td>8.51</td>
<td>8.51</td>
</tr>
<tr>
<td>C - Tail width</td>
<td>3.37</td>
<td>3.41</td>
<td>3.14</td>
<td>6.77</td>
<td>7.87</td>
<td>7.32</td>
</tr>
</tbody>
</table>

Table 4a.

**Calculated size (when scaled from left eye to tip of snout)**

<table>
<thead>
<tr>
<th></th>
<th>Mount 1</th>
<th>Mount 2</th>
<th>Fresh</th>
<th>% difference of mount 1</th>
<th>% difference of mount 2</th>
<th>Average difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - Overall length</td>
<td>61.84</td>
<td>62.45</td>
<td>53.60</td>
<td>13.32</td>
<td>14.17</td>
<td>13.75</td>
</tr>
<tr>
<td>B - Belly width</td>
<td>9.43</td>
<td>9.43</td>
<td>8.7</td>
<td>7.74</td>
<td>7.74</td>
<td>7.74</td>
</tr>
<tr>
<td>C - Tail width</td>
<td>3.34</td>
<td>3.38</td>
<td>3.14</td>
<td>5.99</td>
<td>7.10</td>
<td>6.54</td>
</tr>
</tbody>
</table>

Table 4b.

The overall calculated length (using the lower jaw for scaling) of the 1949 skin mount Muskie was 62.36” (1949 mount photograph 1) and 62.97” (1949 mount photograph 2) with a tolerance of +/- 1.5”. The belly width was calculated to be 9.51” (both 1949 mount photographs) with a +/- 0.5” tolerance. This resulted in an average 14.47% increase in length of the 1949 skin mount Muskie relative to the 1949 fresh Muskie. The belly width of the 1949 skin mount Muskie had a 8.51% increase relative to the 1949 fresh Muskie. There was a strong correspondence between the lower jaw and left eye scaling results on
both of the 1949 skin mount Muskies. Slight variations in the scaling could also be the result of offset placement of the eye during the mounting process and as such, the lower jaw measurements were considered to be the more accurate dimension to be used for scaling. Overall the 1949 skin mount Muskie was substantially larger in all directions than it was in the 1949 fresh mount photographs.

To determine the maximum and minimum % difference in dimensions between the fresh and mounted 1949 Muskie, the upper and lower bounds of the 1949 fresh Muskie dimensions were also compared with the 1949 skin mount dimensions.

**Lower Range (when scaled from the lower jaw)**

<table>
<thead>
<tr>
<th>Lower range</th>
<th>Mount 1</th>
<th>Mount 2</th>
<th>Fresh</th>
<th>% difference of mount 1</th>
<th>% difference of mount 2</th>
<th>Average difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - Overall length</td>
<td>60.86</td>
<td>61.47</td>
<td>55.10</td>
<td>9.46</td>
<td>10.37</td>
<td>9.92</td>
</tr>
<tr>
<td>C - Tail width</td>
<td>3.29</td>
<td>3.33</td>
<td>3.23</td>
<td>1.80</td>
<td>2.97</td>
<td>2.39</td>
</tr>
</tbody>
</table>

**Table 5a.**

**Lower range (when scaled from left eye to tip of snout)**

<table>
<thead>
<tr>
<th>Lower range</th>
<th>Mount 1</th>
<th>Mount 2</th>
<th>Fresh</th>
<th>% difference of mount 1</th>
<th>% difference of mount 2</th>
<th>Average difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - Overall length</td>
<td>60.34</td>
<td>60.95</td>
<td>55.10</td>
<td>8.68</td>
<td>9.60</td>
<td>9.14</td>
</tr>
<tr>
<td>B - Belly width</td>
<td>8.93</td>
<td>8.93</td>
<td>9.20</td>
<td>-3.02</td>
<td>-3.02</td>
<td>-3.02</td>
</tr>
<tr>
<td>C - Tail width</td>
<td>3.26</td>
<td>3.30</td>
<td>3.23</td>
<td>0.98</td>
<td>2.15</td>
<td>1.57</td>
</tr>
</tbody>
</table>

**Table 5a.**

**Upper range (when scaled from the lower jaw)**

<table>
<thead>
<tr>
<th>Upper range</th>
<th>Mount 1</th>
<th>Mount 2</th>
<th>Fresh</th>
<th>% difference of mount 1</th>
<th>% difference of mount 2</th>
<th>Average difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - Overall length</td>
<td>63.86</td>
<td>64.47</td>
<td>52.10</td>
<td>18.42</td>
<td>19.19</td>
<td>18.81</td>
</tr>
<tr>
<td>B - Belly width</td>
<td>10.01</td>
<td>10.01</td>
<td>8.20</td>
<td>18.08</td>
<td>18.08</td>
<td>18.08</td>
</tr>
<tr>
<td>C - Tail width</td>
<td>3.45</td>
<td>3.49</td>
<td>3.05</td>
<td>11.51</td>
<td>12.55</td>
<td>12.03</td>
</tr>
</tbody>
</table>

**Table 6a.**

**Upper range (when scaled from the left eye to tip of snout)**

<table>
<thead>
<tr>
<th>Upper range</th>
<th>Mount 1</th>
<th>Mount 2</th>
<th>Fresh</th>
<th>% difference of mount 1</th>
<th>% difference of mount 2</th>
<th>Average difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - Overall length</td>
<td>63.34</td>
<td>63.95</td>
<td>52.10</td>
<td>17.75</td>
<td>18.53</td>
<td>18.14</td>
</tr>
<tr>
<td>B - Belly width</td>
<td>9.93</td>
<td>9.93</td>
<td>8.20</td>
<td>17.42</td>
<td>17.42</td>
<td>17.42</td>
</tr>
<tr>
<td>C - Tail width</td>
<td>3.42</td>
<td>3.46</td>
<td>3.05</td>
<td>10.76</td>
<td>11.82</td>
<td>11.29</td>
</tr>
</tbody>
</table>

**Table 6b.**
It should be noted that the values included in Tables 5a, 5b and Tables 6a, 6b are comparisons of the Muskie dimensions at the extremes of the tolerances. Tables 5a and 5b would result if the 1949 fresh Muskie were at the upper end of the measurement tolerance at the same time as both of the 1949 skin mount Muskie solutions were at the lower end of the measurement tolerance. Tables 6a and 6b would result if the 1949 fresh Muskie were at the lower end of the measurement tolerance at the same time as both of the 1949 skin mount Muskie solutions were at the upper end of the measurement tolerance. The results presented in Tables 4a and 4b (specifically 4a due to the lower jaw scaling) are the calculated results for both the 1949 fresh and skin mount Muskies and represent the best solution for the size comparison.

I trust that this answers the questions that you had had about the length and width of each of the skin mount Muskies shown in the photographs.

Dan Mills
DCM Technical Services Inc.
Imaging Forensics
18627 Brookhurst St.
PMB 324
Fountain Valley, CA 92708
(714) 775-3120

Peer Review of:

Photogrammetric Solution for Historic skin mount Muskie Lengths
and
Photogrammetric Solution for Historic Muskie Lengths
by DCM Technical Services, Inc.

I have reviewed the two reports mentioned above for methodology, inclusion of valid variables and margin of error.

In both reports, the methodology used was appropriate for the content of the photographs and the information available about the objects in the images.

In both reports all relevant variables were considered in the analysis.

In both reports a margin of error was provided that appears to be consistent with the available data and the methods employed in making the measurements.

In my review of these reports I find that the methodology, inclusion of valid variables and stated margin of error were all appropriate for the images analyzed based on their content and the information known about the objects in the photographs.

George Reis
Imaging Forensics, Inc.

October 10, 2005
DOUG PETROUSEK REQUEST BY WRMA

General:

1) What was Karl Kahmann's and general taxidermist's practice with regard to the fin removal during the mounting process?
2) (General comments on mount fin placement, was it common to replace them, how does it relate to these mounts.
3) Considering the status of these fish, how close in size should the mounts be to the actual fish.
4) How much shrinkage can one expect on a mounted Muskie of this size over time.
5) Was it common to card fins or replace them in the 1940's.

Answers to General question category:

1] I think it safe to say that fins were never removed, replaced or repositioned in a normal mounting procedure. Nothing would be gained by doing so and would complicate the process. In 30 years of mounting customer fish, restoring and repainting old mounts from other taxidermists, including many from the shop of Kart Kahmann, I have never seen this done. Fins that are missing or badly damaged when the fish is caught are repaired or replaced but not removed to be repositioned. Fin removal and replacement with artificial fins on some species of fish is becoming popular today but generally not with muskies and was not done in the days of Kahmann.

2] In general, the fin placement on the mounts Spray's fish by Kahmann are "unusual” and are not consistent with publicity photos of those fish prior to being mounted.

3] The size of the mount, length and girth, could and should be accurate to the dimensions of the fish when it was measured for record book consideration. An accomplished taxidermist, given original [correct] dimensions of a fish to be mounted would be able to maintain those dimensions in the mount.
Any excessive deviations from those dimensions would only occur because the taxidermist intended for those dimensions to vary from the original.

4] Shrinkage (measurable) of a mount such as done by Kahmann after over decades would be, in my opinion, zero.

5] Common practice in the 1940's was to keep all fins attached to the skin and mount in this configuration. Original fins remaining on the original skin were then repaired [if needed] and reinforced in the mounting procedure. This is the most commonly used method today in skin mounting fish.

Doug Petrousek
Spray's 1st World Record
59 1/2 lbs. 1939
Being held by Alton Van Camp

Mount of 1st record done by
Karl Kahmann

In comparing the mount photo of Spray's 59 1/2 lb. record to the photo of the fresh fish, there are some anatomical differences that are difficult to justify. Recognizing that these photos were taken from different angles, which may affect exact measurements, I offer the following;
Point #1 in photo B illustrates a back to belly measurement much larger than in photo A.
Point #2 shows dorsal, anal and caudal fin relationships not consistent with that of photo A. In addition, the position of these fins are not consistent with regard to ventral fin placement.
Point #3 shows a wider distance between pectoral and ventral fins than in photo A.

It is obvious that the overall appearance of the mount bares little resemblance to the fish shown in photo A. The girth from pectoral fin back to anal opening has been greatly enlarged. Basic fish mounting principles which include measurements and tracings of fresh fish would make it very unlikely that an experienced taxidermist could create a mount as in photo B, from a fresh fish as in photo A, unless these distortions were intentional.

Doug Petrousek
Spray 1940 World Record 61lbs. 13oz. Comparison

The above photos are shown for comparison purposes. Photo A is Louie Spray holding his 1940 record. Photo B is Karl Kahmann's mount of 1940 fish. Photo C is mounted musky unrelated to Spray's, for comparison. They have been edited to approximate equal length. I have indicated 6 points of interest in photo B.

Point 1.] The ventral fins are strangely positioned in relation to both the anal fin and pectoral fins. Measurements from photo A compared to photo B do not come close. There is a longer distance from ventral to anal fin in the mount. There is a shorter distance from pectoral to ventral fin in the mount. Measurements from A compared to C are much closer, even though not the same fish.

Point 2.] As above.

Point 3.] Depth of mount from back to belly even though larger is common in a mount due to baggy skin between pectoral and ventral fins and the need to fill out this area to prevent wrinkling. The measurement here is less than what it appears in photo A. This is consistent with the stretching of the skin from some point behind the ventral fins. This stretching would also help explain the greater distance between the ventral and anal fin than appears in photo A.

Point 4 & 5.] Dorsal and anal fin measure closer to tail than in photo A.

Point 6.] Head measures much shorter on mount than in photo A. This may be partly accounted for in different photo angles in A & B.

The mount of this fish is obviously missing key anatomical dimensions, measurements, which an accomplished taxidermist would certainly pay attention to in the mounting process. Especially in the case of a world record. In my opinion the only way, other than intentional distortion, to obtain a mount as in photo B from the fish in photo A is for the taxidermist to ignore the necessary preparation for mounting, such as, measurements, tracings, etc. This was a World Record fish and would receive much attention and shine the light of notoriety on the abilities of
Karl Kahmann. Kahmann was an accomplished taxidermist who had mounted hundreds if not thousands of muskies in his day. There are many examples of Karl's work to be viewed in the National Fresh Water Fishing Hall of Fame. I think it safe to say that this mount by Kahmann exhibits these unusual dimensions because that was Karl's intent. Karl was not a neophyte and knew exactly what he was doing.

Doug Petrousek

Spray 1949 World Record 69lbs. 11oz. Comparison

Outline of mount superimposed on photo of fresh fish. Positioning of fish in photos is different making direct comparison difficult. The fresh fish seems to be pushed towards the camera in midsection area. The head appears to be angled away; Without having better photo evidence of the fresh fish I can only offer my opinion on the unaltered authenticity of the fish mounted by Hugh Lackey. The mount is obviously thinner from back to belly than the fresh fish. This is not generally appealing to a customer. It is not accurate on the part of the taxidermist if the mounted fish is meant to display it's original girth. Generally if a taxidermist were to vary from maintaining exact dimensions it would be to construct the body form larger (at least in girth) rather than smaller. The ventral, dorsal, anal and caudal fins are placed farther back on the mount than on the fresh fish. Although some variation in positioning is normal, proper measurement of the fresh fish prior to skinning, in order to construct an accurate form to mount the skin, would make this much variation unusual. The thin girth and the rearward position of the fins are consistent with an attempt to stretch the skin onto a form making the mount measure longer than the fish actually was. In an attempt to stretch the skin it may be necessary to reduce the girth, much the same as in stretching a rubber band. Overall the mount done by Lackey appears to be of a high quality as judged by the standards of the day. I believe, however, that the mount of the fish held by Spray, as done
by Lackey, is not an accurate representation. I must assume that Lackey recognized the importance of mounting this potential record fish to both his taxidermy and sport shop business. I would assume also that he would take the greatest care in pleasing Spray and representing the fish as accurately as possible. This would require him taking a number of measurements prior to the construction of the artificial body upon which the skin of the musky would be mounted on. Leaving room for error (which may not be deserved) on the part of Lackey; I find it difficult to justify the differences between the appearance of the mount and the fish held by Spray.
The WRMA’s effort to hold the remaining All Tackle World Record Muskellunge to a consistent standard of measure began with the following visualization experiment, which compared actual photographs of the 1940 and 1949 Spray Record Muskellunge to artificially constructed muskellunge silhouettes. This visualization experiment was inspired by similar research completed in the early 1990s by Mr. John Dettloff into the now-retired Art Lawton All tackle World Record Muskellunge.

It was noted in a *Musky Hunter* magazine article from this same time period that the Lawton visualization experiment was used to help determine the actual size of Lawton’s former record. Accordingly, the WRMA requested that the FWFHF forward us a copy of Mr. Dettloff’s complete report, in order to ensure that we had precisely replicated Mr. Dettloff’s methodology.

The WRMA’s repeated requests for this information during the course of 2004 were officially denied by the FWFHF for unknown reasons in the fall of 2004. Nevertheless, the WRMA still finds the Dettloff visualization experiment, albeit in the abbreviated format as reported in the *Musky Hunter* article referenced above, quite compelling, and used this information as a basis for modeling this component of our study.

Our visualization experiment began with an examination of photographic evidence relating to the 1940 Spray record, in order to provide a broader base of information and additional materials for our 1949 visualization experiment. It should be noted that the 1939 Spray Record was never a consideration for this procedure as - incredibly - there is no extant photographic record of Spray with said fish.

After the WRMA completed this work in the summer of 2004, we found ourselves in complete agreement that reasonable doubt now existed with regard to the Spray records. Further, it now appeared that our 1940 visualization experiment not only provided a broader base of information for us to work with, but also pointed toward fraudulent behavior on the part of Spray.

In sum, we find the results of both the Dettloff and WRMA experiments as yielding compelling evidence that neither the Lawton nor Spray fish came remotely close to possessing the record-setting dimensions originally claimed by these anglers.

Please accept the following as our findings:
Subjects:

In photos (A) and (C) stands the subject (President of the WRMA, Richard Delaney) who has been measured at slightly more than 6’ tall without shoes. In photo (B) stands Mr. Spray who, according to a medical report in our possession that dates back to 1934, was 5’11” tall.

It is of course common practice for patients to remove their shoes for a standard medical examination. Nonetheless, it is not known conclusively whether or not Mr. Spray had his shoes on or off during the medical examination. Therefore, in order to extend the benefit of the doubt to Mr. Spray’s record claims, we used a 6’ plus subject height for this controlled visualization experiment.

Members of the WRMA in conjunction with professional photographer Nancy Shepherd conducted this experiment in August of 2004.

Silhouettes / Fish:

Photo (A) is a cardboard mock-up of a muskie that measures 54 ½” long at its longest vertical point, and 10” across at its widest horizontal point.

Photo (B) is Mr. Spray holding the 1940 World Record claimed to have been 59 ¼” long with a 32 ½” girth.

Photo (C) is a wooden (pine) mock-up of a Muskie that measures 59 ¼” at its longest vertical point, and 11” across at its widest horizontal point.
**Distance / Silhouettes:**

We asked the photographer to duplicate as best she could the camera height and distance in (B). (Please consider this work was completed well before the DCM photo analysis was started.)

The camera height used for (A) and (C) was 45” from the floor to the camera lens. The 45” measurement she selected is what one would expect from someone of average height using a viewfinder camera in the 1940’s.

**Distance / Spray:**

We conducted a survey of some WRMA members regarding how far they would judge the distance between the backside of the fish in photo (B) and Mr. Spray in this 1940 photo. This survey was conducted in early April 2004, via separate emails. Please consider that a large portion of these famous WRMA members’ livelihoods owes to their enviable demonstrated ability to catch, handle and photograph large muskellunge.

Dick Pearson       8-14”
Jim Saric             8-11”
Pete Mania          9-12”
Larry Ramsell     9-11”
Doug Johnson     8-11”
Mike Lazarus      9-14”

Amazingly, these individuals reached the same minimum of 8-9”, without suggestions or contact with each other on this subject. We elected to only consider using the lower committee minimum distance of 8” - rather than even a minimum average – in order to give the Spray 1940 fish every benefit of the doubt.

We find it of consequence to note that this group of individuals separately scrutinizing the same picture was able to arrive at a range of numbers so closely matching one another.

Further, an unforeseen by-product of this survey is the fact that each of these experts – again separately – expressed their sincere doubt as to the claimed size of said fish, without any prior prompting by the WRMA.
Girth / Silhouettes:

We contacted James McGregor of Advanced Taxidermy in Toronto Canada in April of 2004 to calibrate the thickness (side to side) of some very large carefully measured muskellunge molds to determine correct measurements for use with the silhouettes.

The two largest girth molds available to him at the time were 28 and 27”. The calibration of these molds yielded a thickness of 7 ½” and 7 5/8” respectively. Many lesser girth fish were calibrated as well, and as one would expect, a decrease in thickness led to a proportionate decrease in girth.

Based on the Advanced Taxidermy work we elected to use the conservative fish thickness range of 7-8” only for the 1940 Spray fish, again giving this Spray record fish every benefit of the doubt.

For photographic distortion perspective, it would normally be required to add the committee minimum distance between the fish and Mr. Spray’s body (8”) and the minimum fish thickness (7-8”) together for a (minimum) viewer distortion perspective of 15”-16”. This distortion perspective would be the difference between Mr. Spray and the front of the fish as seen in this (B) photo.

Next we formed a cloth tape measure into an oval 32 ½” muskellunge shaped girth to arrive at a fair horizontal flat measurement for the silhouette. Obviously, as we moved the “thickness” in the 7-8” range, the horizontal measurement changed accordingly. Using the 8” thickness measurement in the formed 32½” tape measure we arrived at a measurement of 11 ½”, a 7” thickness, of course, yielded even greater readings.

We elected to use an conservative 11” horizontal measurement for the widest point in the (C) 59 ¼” silhouette, and a 10” horizontal measurement in the (A) 54 ½” silhouette, to once again extend to Spray’s 1940 claim every benefit of the doubt.

Distance / Silhouettes:

We then elected to hold both silhouettes 7” from the front of the subject to the front of the silhouette. This is 1” below the lowest estimation given by any member the committee.

Please consider we actually held this fish 8-9” less than the already conservative 15-16” minimum viewer distortion perspective in order to remove any possible chance for ambiguity in our findings.

In reality, this would mean the subject in both (A) and (C), (had he been holding a real fish with a girth of “only” 27-28”), would had to have been holding this fish perfectly tight against his body.

Our desire here was not to disregard our esteemed committee’s recommendation, but rather to give the 1940 Spray record every benefit of the doubt - and then some.
Based on the silhouette work alone - even while employing the most conservative of measurements - it is painfully obvious that this fish falls well short of the claimed 59 ¼” X 32 ½” (B). Though the length discrepancy is indeed glaring, we would like to point out the stated girth is also perhaps as much as 50% overstated. It was therefore our unanimous opinion that, based on this research alone, this fish could not have possibly weighed anywhere near the claimed 61-13 without some type of artificial weight added (See section elsewhere on suspicious lumps viewable in photo (B).

In sum, we discovered that there was a clear physical impossibility for a 6’ subject (we actually used 2) to hold the 59 ¼” silhouette out in front of himself and not utterly dwarf the 1940 Spray record. Of particular interest is the fact that by employing simple human reasoning ability alone it is clear to see that the fish fits within the calculated DCM range as described earlier in this report.

Real Fish Comparison:

In photo (D) another subject (WRMA Member Bruce Wisner) who stands over 5’11 1/2” tall without shoes with a 33” waist (without floatation suit) holding a 52”X 23” muskellunge in a similar fashion to Mr. Spray’s 1940 World Record (B). This 52” fish (D) certainly compares nicely with the claimed 59 ¼” (B) Spray record. Of course, this real fish comparison work serves to further reinforce the earlier silhouette findings. Again, of particular interest is the claimed 32 ½” girth of Spray’s fish (B), a clear physical impossibility based on what can now be readily seen by this simple, yet compelling real fish comparison.
The second part of our visualization experiment compared photographs of the current FWFHF All-Tackle World Record, claimed by Spray in 1949 to have measured 63 ½” in length with a 31 ¼” girth, weight 69lb, 11oz, with artificially constructed cardboard muskellunge silhouettes.

It has been said that a picture is worth a thousand words; if so, we estimate this grouping of photographs to be worth at least three times that amount.

The members of the WRMA were not only amazed by the compelling results this commonsense experiment revealed, but also by the realization that over the course of more than 50 years of controversy surrounding this fish, no one had previously considered this simple undertaking.

Subjects:

In photos (E) and (G) stands WRMA President Rich Delaney, the same subject as (A) and (C) in the 1940 report. In photo (F) stands Spray, now 49 years old. It is likely Spray was a few pounds heavier, but certainly no taller than he would have been 15 years earlier during the 1934 medical exam.

Members of the WRMA again conducted this experiment in conjunction with professional photographer Nancy Shepherd in August of 2004.
Silhouettes / Fish:

Photo (E) shows a cardboard mock-up of a muskellunge that measures 63 ½” long at its longest vertical point, and 11” across at its widest horizontal point.

Photo (F) shows Mr. Spray holding the current 1949 All-Tackle World Record Muskellunge claimed to have measured 63 ½” long with a 31 ¼” girth.

Photo (G) shows the same cardboard muskellunge mock-up used during the 1940 experiment that measures 54 ½” at its longest vertical point, and 10” across at its widest horizontal point.

Distance / Spray vs. Silhouettes

Photographer Nancy Shepard choreographed the arm angles of the subject (Delaney) in (E) and (G) to mirror those of the subject (Spray) in (F) to the best of her ability.

We feel confident that a 7-8” fish thickness represents a very conservative estimate when attempting to replicate the dimensional thickness of a muskellunge specimen with a reported girth of 31 ¼”. However, we still elected to hold both silhouettes to the smaller 7” minimum from the front of the silhouette to the front of the subject. (Note: Please remember, this is still well below the minimum calibrated thickness of both the thinner 27 and 28” girth fish.)

In other words, this experiment depicts the 1949 Spray record muskellunge well below the calibrated dimension of the 27” to 28” girth fish as if hanging from the oar on the same plane as Spray, positioned as if it were perfectly tight against the subject’s body in both (E) and (G).

Again, our intention was not to distort reality, but rather to extend every possible benefit of the doubt to the Spray 1949 All-Tackle World Record.

Distance / Silhouettes:

We asked the photographer to duplicate as best she could the camera height and distance for these silhouettes; please remember once again this was before contacting DCM for formal photo analysis.

Without prompting, she advised us that she was having problems with silhouette (E). When asked to expand, Shepherd said:
“The cardboard fish (63 ½” silhouette) is too long…I can’t fit it into the picture.”

Shepherd then requested that we move silhouette (E) outside the garage and raise the camera height to accomplish the task we asked of her (this request came after the 1940 photo shoot was already completed).

The camera height she elected to use for (E) was 51 ½” from the floor - not because this was her best estimate, but rather because she felt it necessary to allow the 63 1/3” silhouette (E) to fit into the frame.

The members of the WRMA elected to use the same camera height for (G) as well as (E) to maintain the same viewer perspective for both silhouettes.

We are confident that the 51 ½” measurement is somewhat higher than the camera angle used in (F). However, considering this could only help to increase the perceived viewer distortion perspective of this fish, we elected to maintain this measurement, to again grant the 1949 Spray record the benefit of the doubt at each step of the process.

**Real Fish Comparison:**

(F)   (H)
In photo (H) another subject (Martin Williamson) who stands 5’ 10 ½” without shoes with a 38” waist is pictured holding a 53 ½” (fork length) X 31 ½” muskellunge close to his body. Photo (H) was used as a basis for comparison with study photo (F), shown above.

First, may the reader note the length of both (F) and (H) are certainly comparable in these photos, despite the fact that Mr. Spray’s fish was claimed to be substantially longer.

Next, we ask the reader to consider the obvious and substantial apparent girth discrepancy between these two fish, both with reported 31+” girths.

The 11” width used in silhouette (E) was selected before the writing of this comparison, when one compares (E) to (H) the significantly smaller width of the WRMA silhouette used to represent a 31 +” Muskellunge becomes apparent.

Therefore, even though there is supposed to be only a ¼” difference in girth between these two fish, when viewed side-by-side it becomes obvious that there is no way possible for the 1949 All-Tackle World Record Muskellunge to have possessed the exceptional 31 ¼” girth claimed by Spray.

The ramifications of this apparent girth discrepancy are particularly damaging to the 1949 Spray record claim.

It is a well established fact that living things can only achieve their maximum potential weight not only by being merely long or tall, but also by having an exceptional volume of body mass for their given length or height.

In other words, it would appear a likely physical impossibility for a fish with a length somewhere near that of the Williamson fish (H) but with considerably lesser girth to weigh 69lbs, 11oz.

Viewed oppositely, when considering the Williamson fish, with a fork length of 53 ½” and 31 ½” girth weighed more than 60lbs, how much more would a 63 ½” muskellunge with a 31 ¼” full length girth have weighed? If anything, common sense would seem to dictate that such a specimen would have undoubtedly weighed significantly more than the claimed 69lbs, 11 ozs.

Finally, we would like to direct the readers attention to the difference in shapes of these specimens in (F) and (H). While (F) would be considered to have a “full length girth”, (H) would be considered to have a very distinct “belly” – obviously where the 31 ½” measurement was taken. If one were to choose to accept the Spray claim of a 31 ¼” girth for (F), then one would also have to accept this extreme 31” ¼” girth to be “full length” - something the members of the WRMA find nearly impossible to believe.
Visualization Experiment Summary:

The 1949 visualization experiment yielded results strikingly similar to those derived by the 1940 experiment. It is again plain to see that the fish in photo (F) is both shorter and thinner than the claimed 63 ½” X 31 ¼” even when one allows an extra inch of fish length due to the slight curve in the 1949 record (F) as it hangs.

As the 1949 visualization experiment progressed it became obvious that the claimed dimensions of the 1949 record were grossly misrepresented by Spray. In fact, it would appear that the claimed dimensions of Spray’s fish were completely off the charts…in the wrong direction.

It is important to again note that these discrepancies are apparent even when relying upon the undersized silhouette (F) we elected to use for this experiment.

Viewed together, one cannot help but conclude that the results of the 1940 and 1949 visualization experiments help to expose a pattern of fraud on the part of Spray.

Further, it is difficult to overstate the historical significance of the obvious similarities between the visualization experiment results outlined above, and those derived by the 1957 Lawton visualization experiment conducted by FWFHF President, Mr. John Dettloff – a critical component in the FWFHF’s landmark 1992 decision to disqualify the Lawton record.

In the last analysis, although the muskellunge Mr. Spray is holding is surely a fine specimen, we sadly feel that this simple experiment shows it to have been no larger than any number of other large muskellunge captured from this same time period and geographic area.

Editors Note:

Upon viewing these photos and silhouettes during a January 2005 meeting with a WRMA official, Larry Ramsell himself exclaimed, “This is incontrovertible”.

It should be noted that Mr. Ramsell personally measured and signed off on each silhouette after carefully considering our measurements. Given Mr. Ramsell’s status as a muskellunge researcher and position as world record advisor, we feel in all cases his absolute approval with our methodology and findings should weigh heavily with the FWFHF.
Review of Louie Spray Affidavits
By Larry Ramsell

Discussions of the validity of Louie Spray's world record muskies center around the size of the mounted fish (see mounts vs. fresh fish comparison elsewhere) and the "mountain of evidence" that supposedly supports Spray's records, the affidavits. On the surface, the many supporting affidavits and information give credence to Spray's records, but a thorough review of same causes many discrepancies and questions to arise.

As with the analysis of the mount vs. the fresh fish photos, the primary fish in question is the current world record fish from 1949. The 1940 affidavits and information are looked at as well to show pattern.

1949 Affidavits and Statements:

Statement on USPO stationary: This statement does not appear to be written by the "principal" witness, Postmaster Jack Reinke. While no handwriting analysis has been conducted, it is conceivable that the document was penned by one of the other persons involved, and appears to be more like that of the principal, Louie Spray.

While the supposed length and girth of said record fish is on this document below the indicated weight, it does not say that Mr. Reinke did in fact measure or witness the measuring of said fish. Further, this is not an affidavit, even if it were please refer to Rich Delaney’s section on eyewitnesses vs. scientific evidence.

The question arises did Spray in fact write this document and then have the others, including Mr. Reinke sign it?

Postmaster Jack Reinke affidavit (document: This affidavit, signed by Jack Reinke, was not done until October 28, 1949, eight days after the catch. Of particular interest with regard to this affidavit, is the fact that it was pre-prepared, as were all other affidavits, by Mr. Spray or his wife Inez. This "pre-preparation" of said affidavits is obvious when read, as they come forth in both first and second person in the statement, and the "common themes" are consistent in all affidavits. In addition, Inez Spray was the notary of this affidavit.
The question arises did Mr. Reinke actually measure said fish as indicated in this pre-prepared affidavit, or did he merely sign what Mr. Spray presented to him?

It is certainly plausible that Mr. Reinke did in fact weigh the fish at 69-11, then, on the 28th accept Spray’s length and girth measurements while signing the pre-prepared affidavit.

Mr. Reinke could have easily been victimized and later deceived by Spray in any number of ways that fateful night. It is certainly conceivable that while Mr. Reinke recorded the weight accurately, the three large and intoxicated men called out the false measurements while in his presence. The details of “how” are of no real consequence. The fact remains, a fraud was committed that night because there is no way that fish was remotely close to the stated 63 1/2”X 31 1/4”!

It should be noted, that the "witnesses" to both of the Reinke documents were the record claimant and his two boat partners, hardly "un-biased" witnesses.

From the Quentmeyer affidavit: "That he would estimate that it took Mr. Spray approximately 50 minutes to land the fish...and the fish was finally landed at about 4:00 P.M."

From the Haag affidavit ("D"): "That at about 4:00 P.M. on that date...it took approximately 45 minutes to land said fish."

Both catch witnesses stated in their affidavit that the fish was "landed" at "about 4:00 p.m". Considering that the fight with the fish lasted 45 to 50 minutes, the Spray story timeline cannot be correct (see timeline discrepancies below).

From the Ceranske’s affidavit: "That Mr. Nixon Barnes measured the fish in the presence of all the above named people and claimed it measured 5' 4" long.

From the Barnes affidavit: "That I measured the same (fish) and found it measured 5' 4" long."

NOTE: Nixon Barnes was also a signatory to the witness statement of Spray's 1939 world record fish, as well as a recorded entrant in the "guess book" for Spray's 1940 world record fish. Again, hardly an un-biased witness to the 1949 fish too.

From the Pastika affidavit: "That he was present in said shop at approximately 6:00 P.M. on October 20th, 1949 when Mr. Louis Spray...came to said shop to obtain ice with which to pack a large muskie."
From the Jordan affidavit: "...says that he was at Pastika’s Boat (Bait) and Tackle Shop at about 6:00 P.M. on October 20, 1949 when Mr. Louis Spray...came in said shop asking for ice."

The question arises, did Mr. Spray "pack" said fish with the ice obtained to add artificial weight to it prior to the weigh in?

From the Lackey affidavit: "...on Saturday, October 22, 1949, Mr. Louis Spray of Rice Lake, Wisconsin, delivered to him a very large muskie to mount...That examination of the muskie disclosed that there was nothing inside or out to add artificial weight."

Ice melts and if used would not be present two days after the original weighing. There is no mention of Lacky re-weighing said fish. It is proven that Lackey altered the Spray 1949 mount for length (see DCM report, mounts vs. fresh fish comparison elsewhere).

Affidavits "Common Themes" in addition to obvious formatting, indicating preparation by a single person:

A steel tape was used for the measurement: the Reinke affidavit, Quentmeyer affidavit, Haag affidavit.

"...the largest muskellunge that I/he/either of them had ever seen"; Reinke affidavit, the Ceranske's affidavit, the Barnes affidavit, the Pastika affidavit, the Jordan affidavit, the Stroner affidavit, and the Kahmann affidavit.

"...that the muskie had been freshly caught."; Ceranske's affidavit, or "The fish was undoubtedly freshly caught at the time we had seen it."; Barnes affidavit, or "That I did observe that it was freshly caught..."; Pastika affidavit, or "...that it was freshly caught."; Jordan affidavit, and "That I saw the same was freshly caught..."; Kahmann affidavit.

"...they proceeded to the Stone Lake post office."; Quentmeyer affidavit and Haag affidavit.

Timeline discrepancies in affidavits and sequence of events & stories and other interesting notes:

While not in affidavit form, Spray's accounts of what transpired after leaving Herman’s Landing after bringing in his 1949 fish, are different than his boat partner’s and witnesses, and stated the following two versions:
From Louie Spray's book, "Looking Back at that Phase of My Muskie Days.": "About 3:30 p.m., I knew Ted was freezing because he was not dressed for the cold, so I suggested we go in and have some hot drinks and get warm at a nearby resort...So when we left the tavern...George took the motor and ran us right back to the same old spot...My fingers were numb and cold when I rigged my own make up of a harness onto a fourteen-inch long sucker and laid him in the water...George was rowing around in that spot, and I would let the sucker troll out and then bring it back in with a series of jerks...The battle had lasted about forty minutes and we finally landed the fish at around 4:00 p.m."

From the Quentmeyer affidavit: "That he would estimate that it took Mr. Spray approximately 50 minutes to land the fish...and the fish was finally landed at about 4:00 P.M."

From the Haag affidavit: "That at about 4:00 P.M. on that date...it took approximately 45 minutes to land said fish."

If, as indicated, the three men went traveled to the resort at "About 3:30 p.m." and had "some hot drinks," and then traveled back to the fishing area, rigged up a sucker and rowed "around in that spot," letting the sucker out and bringing it back in, how could they have hooked and played a fish for either 40 (Spray), 45 (Haag) or 50 minutes (Quentmeyer) and land it by 4:00 p.m., especially when it would have had to have been 4:00 p.m. or after when they got back out fishing? For this landing timeline to be even close, they would have had to hook the fish at 3:10 to 3:20 p.m., ten to twenty minutes BEFORE they decided to "go" in!

Perhaps the fish was stashed at the Indian Trail Resort waiting to be picked up? It is also interesting that that they did not start fishing until "shortly after noon" that day, around 1 o’clock according to Hagg in an October 1949 newspaper interview. Then, after only two ½ hours, they are cold and hungry and heading in for a break!

Again from Spray's book, version #1 of the sequence of events after leaving Herman's Landing: "We bought some gas (at Stroner's store) and quickly departed with the fish, heading down Highway 27 and on out to Karl Kahmann's, the taxidermist, whose scale I thought we could use to weigh the fish on."

From a Spray radio interview as written in Musky Hunter magazine, Feb/Mar 1992, page 25; "In Defense Of Louie Spray" by John Dettloff, version #2 of the sequence of events after leaving Herman's Landing: "When we came in from the flowage I went right into Kahmann's (taxidermist) to show him what I had..."
From the Quentmeyer affidavit, version #3: "That when it was discovered that Stroner's scales were not large enough to weigh said fish, they proceeded to the Stone Lake post office..."

From the Haag affidavit, version #4: "That the scales at Stroner's store were not large enough to weigh the fish, so they proceeded to the Stone Lake, Wisconsin post office...That thereafter they proceeded to the shop of Karl W. Kahmann, taxidermist at Hayward, Wisconsin..."

So here we have two different versions by Spray and yet a third affidavit version by his witnesses.

1940 Affidavits and Statements:

From the Spray affidavit: "Witness" to this affidavit were Wilbur J. Schuman and Margaret Schuman. "Notary" to this affidavit was Wilbur J. Schuman.

The question arises, how can one person be "witness" and "notary" to the same document and have any credibility.

From the Ingersoll affidavit: Affidavit pertained to events of August 22, 1940, but was not executed until September 7, 1940. The affidavit said; "That I weighed and measured the muskellunge in the usual manner". Witness to the affidavit was Louie Spray and Wilbur J Schuman, and again the notary was Wilbur J. Schuman.

One "biased" witness, and the other also the notary. Note: Ingersoll was also a signatory to the 1939 Spray world record "witness statement".

From the Moreland, Simonson and Kahmann affidavit: The affidavit says; "...that we weighed and measured a muskellunge caught by Louie Spray."

Did they actually "weigh and measure" the fish, or just sign the affidavit that was pre-prepared by Spray? Ingersoll said in his affidavit that he weighed and measured the fish.

From the Jorgenson affidavit: Jorgenson's affidavit said; "I know nothing about the Spray 61 lb. 13 oz. Muskellunge, except that I saw it on display at Spray's Cafe & Bar, Hayward, Wisconsin."
If Jorgenson did see the fish at Spray's Cafe & Bar, he did not sign the "Spray Guess Book" as did 520 other people that saw it there. Was he really there? Over half (50.39%) of the "guesses" in that guess book had the fish at 56 inches or less, which falls in line with the DCM Photogrammetry analysis.

Excerpts from the Karl Kahmann letter to Miss LaMonte, American Museum of Natural History in New York, then world record keepers:

"Purely as a matter of putting your institution on its guard as regards the recording of the largest Fish caught on hook and line, I will try to point out several things I have noticed in my many years of mounting fish and particularly in the two large Muskellunge recorded for the year 1939.

You have all data on length, weight and girth of the fish caught in Grindstone Lake, Wis. by Louis Spray and the one taken in Eagle Lake, Ontario by J.J. Coleman, so we need not go into this except to call your attention to the fact that the girth of the Spray fish exceeds that of Mr. Coleman by several inches--and--girth enters very largely into what a fish will weigh.

I have mounted roughly 3000 Muskellunge in the past 35 years and naturally can guess the weight of a fish fairly closely, unless it has been filled with sand and gravel, rocks, steel shafting sash-weights, or just plain water, which is too often the case.

...I am satisfied that the Coleman Fish does not come up to weight or measurements...

I am afraid that there is too much commercialization, and too much of 'Fisherman's Liberty' in these 'Records' for any scientific institution to safely vouch for them. On the other hand, I cannot see how you can do more than to rely on affidavits and scaler's record stubs, but these do not show whether the specimen was 'Filled' before weighing."

It is interesting to note, that Mr. Kahmann was the taxidermist of record for both the 1939 and 1940 Spray record muskies. In another document (see mounts vs. fresh fish comparison elsewhere), it has been proven that Mr. Kahmann altered the mount of the 1940 and 1949 Spray record muskies, and likely did it with the 1939 Spray record muskie (See Doug Petrousek’s report that deals with the 1939 fish). Was Kahmann's conscience bothering him or was he trying to help Spray hold on to the record?

The 1939 and 1940 "record race", that had six world record claims over these two years, was taking place right after the depression, at a time in history when local economies needed a boost. While these practices cannot be accepted or condoned, they are somewhat understandable. Two
of the other six "record" fish have already been disqualified. Both were disqualified by NFWFH Board of Director's President, John Dettloff, and both fish, caught in 1939 and 1940 respectively beat the 1939 and 1940 Spray "record" fish.

It is not an historians place to change history, only to report it as it happened or was duly recorded.

*All material referenced herein is readily available upon request.
Affidavit Summary

In the last analysis, it would appear that Karl Kahmann’s letter to the American Museum of Natural History has proven prophetic. The author, wishing to put the institution “on guard” from possible “Fisherman’s liberty,” advises that, “I cannot see how you can do more than to rely upon affidavits and scaler’s record stubs, but these do not show whether the specimen was ‘‘filled before weighing.’’

Kahmann’s lament reflects the unsettling reality of the times in which he lived. In his day, record-keeping organizations had little choice but to rely heavily upon eyewitness testimony when evaluating record claims. Fortunately, today we have at our disposal scientific methods of verification that do not put record-keeping organizations in the awkward - and often unreliable - position of having to “take someone’s word for it” when deciding whether or not to certify a given claim.

It has been shown conclusively that (1) the muskellunge Spray entered for record consideration in 1949 as being 63.5” in length and 31.25” in girth was in fact 53.6” +/- 1.5”, with a width of 8.7”, +/- .5” and (2) that the 1949 Spray mount had been augmented (lower jaw measurement) an incredible 14.47 % in length, and 8.51% in depth. With regard to the muskellunge Spray entered for record consideration in 1940 as being 59.25” in length and 32.5” in girth, it has been shown conclusively that (3) this specimen was in fact 54.84” +/- 3”, with a width of 9” +/-1” and (4) that the 1940 Spray mount had been augmented (lower jaw measurement) 8.17% in length, and a whopping 21.29% in girth.

From the above, it is readily apparent that neither fish came remotely close to possessing the length and girth dimensions claimed by Spray, findings which necessitate a singular conclusion: neither fish possessed the length and girth dimensions necessary to produce the incredible weights claimed by Spray, a clear physical impossibility unless the specimens were - as hinted by Kahmann – filled before weighing, a “…common practice among muskie fishermen back then” (Dettloff, John, Three Record Muskies in His Day, pp. 152).

Larry Ramsell’s “Review of Louie Spray Affidavits” highlights many of the glaring questions and discrepancies confronted by a historian upon examination of these documents. Alone, Mr. Ramsell’s analysis provides ample justification for a critical reassessment of both of the basic credibility of the Spray witnesses, and the validity of using these questionable documents as a means to validate Spray’s record claims.

When viewed alongside the DCM photo analysis, mount v. fresh fish comparisons, WRMA silhouette v. fresh fish visualization experiment and Doug Petrousek’s expert taxidermy review of the Spray mounts, it becomes immediately clear that the Spray affidavits are not only severely flawed, but in too great a conflict with the dictates of hard science and commonsense logic alike to be taken seriously. Therefore, all future reference to the Spray affidavits will proceed from the understanding that these documents have been incontrovertibly discredited.
By way of analogy:

Today, in a court of law, should confident eyewitness testimony contradict indisputable scientific evidence, the former is disregarded in favor of the latter. Today it is indeed fortunate that regardless of how many eyewitnesses place an individual at the scene of a rape, should another man’s DNA instead be found present he will summarily be exonerated of all charges (see case studies below).

To extend the analogy further:
It is clear that much of the key eyewitness testimony pertaining to the 1949 Spray record…

(1) Asserts the physically impossible: “That he would estimate that it took Mr. Spray approximately 50 minutes to land the fish…and the fish was finally landed at about 4:00 p.m.” (George Quentmeyer); “At about 3:30 p.m., I knew Ted was freezing because he was not dressed for the cold, so I suggested we go in and have some hot drinks and get warm at a nearby resort…the battle had lasted about forty minutes and we finally landed the fish at around 4:00 p.m.” (L. Spray).

(2) Displays strong witness bias: Inez Spray notary to Spray affidavits. Nixon Barnes, known friend of Spray, witness to all three Spray records.

(3) Displays substantial influencing of witnesses: common themes and obvious formatting of Spray affidavits.

And so even this cursory (and highly incomplete) review of problems pertaining to the Spray affidavits already leaves us with a more appropriate analogy – the case of a modern court of law being confronted with shaky, biased, and often internally contradictory eyewitness testimony coming into conflict with indisputable scientific evidence.

We find no ambiguity here; when viewed in light of the above, the Spray affidavits testify to an altogether different reality, serving as an indirect proof for the obvious fact that the mounts of both record fish were augmented to complete a fraud perpetuated by Spray and his associates. That indeed if “Chin Whiskered Charlie” had ever pushed the scales to 69lbs 11oz, it could not have been without the aid of the kind of “fisherman’s liberties” alluded to by the taxidermist of Spray’s first two records, Karl Kahmann himself.

In sum, we feel strongly that the vast majority of people who signed off on the Spray records were in fact deliberately mislead by Mr. Spray and his associates. Much like the Lawton and Hartman records, these good people likely witnessed the claimed weight at the scaling. However, in each instance artificial weight was added before weighing, and outside the presence of most of the witnesses.

It is especially telling to note in the case of the 1949 Spray record that after the supposed late-night weigh-in at the post office, the fish was not seen again, nor were any other photo’s taken until after mount augmentation was complete.
In any case, this last line of reasoning is admittedly speculative, relying heavily upon our basic assumption of the general good character of the vast majority of the people of Hayward in Spray’s day – an assumption we are more than confident will stand up to the scrutiny of even the most critical of reviewers.

**Common Shortcomings of Eyewitness Testimony**

“Do you swear to tell the truth, the whole truth, or whatever it is you think you remember?”

-Elizabeth Loftus, Professor, Dept. of Psychology and Social Behavior, University of California, Irvine

Spray’s witnesses were certainly human; as such, they were they vulnerable to a general array of shortcomings common to human eyewitness testimony.

**CASE STUDY 1 – Army Sgt. Dennis Maher**

1. **Eyewitnesses make mistakes**

“Erroneous eyewitness testimony – whether offered in good faith or perjured doubtless is the single greatest cause of wrongful convictions in the U.S. criminal justice system.”

-Rob Warden, Executive Director of the Center on Wrongful Conviction, Northwestern University Law School

Eyewitness misidentifications have played a crucial role in the vast majority of recent post conviction DNA exonerations in the United States. In one such case of eyewitness misidentification, Army Sgt. Dennis Maher was convicted in 1984 of two rapes and an attempted rape. The bulk of the case against Mr. Maher consisted of testimony from the three victims, who were attacked in separate incidents. Each later positively identified Maher as their attacker. In April, 2003, Mr. Maher was finally allowed to leave prison after serving 19 years of a life sentence in Massachusetts after DNA evidence – technology not available in Massachusetts at the time of his conviction – finally exonerated Maher of the crimes.

Perhaps the most startling facet of this case is the fact that three separate women incorrectly identified Maher as their assailant. And yet who among us does not remember our nation’s capital being on the lookout for a “white truck or van” after D.C. police received dozens of erroneous eyewitness tips about such a vehicle speeding away from the scene of the recent “D.C. Sniper” killings?

The suspects eventually charged in the case were driving a blue Chevrolet sedan.

Clearly, eyewitnesses, despite best intentions, are often simply wrong.
Louie Spray’s 1940 record muskellunge has been referred to as, “the most witnessed muskie ever in history.” The bulk of these “witnesses” made guesses as to the muskie’s weight, length, and girth, in hopes of winning a cash prize for the closest guess.

Franklin S. Riley, Jr., felt confident that the fish was 44,” while Toby Michalson – no doubt of equally sound mind - thought it was more like 63”. It should be of no surprise that the vast majority of the “Spray Guess Book” witnesses (516 total guesses) incorrectly identified the length of the 1940 fish (54.84” +/- 3”).

(Editor’s Note: as pointed out by Larry Ramsell, more than half of the individuals who signed the guess book estimated the fish at 56” or less, which falls in line with the DCM photogrammetry analysis.)

Upon closer scrutiny, it would appear that the “Spray Guest Book” merely acknowledges that a muskellunge specimen of uncertain dimensions was on display at this time at Spray’s Bar and Grill, and can hardly provide the kind of circumstantial support for Spray’s second record claim as has been commonly cited. Further, it is not known if the guest book was tampered with, or to what degree Spray friends were motivated to “guess high”.

**CASE STUDY TWO – Tarpon Record Fraud**

2. Eyewitnesses commit perjury

The Spray, Lawton and Hartman fish were all “properly witnessed,” and yet it is clear that use of the signed affidavit as a tool for record verification hardly proved able in these cases to protect record-keeping agencies from becoming victims of fraud. In fact, it would appear quite the opposite: that reliance upon sworn affidavits as a tool for record verification opens the door for unscrupulous anglers able to provide perjured eyewitness testimony to support fraudulent record claims.

To return once again to Karl Kahmann’s prophetic lament, it is true that in the days of Lawton, Hartman, and Spray, record-keeping agencies had little choice but to accept an angler’s “word for it” that a given fish was indeed as large as advertised. Yet even today, record-keeping agencies can be made to appear gullible when relying too heavily upon the sworn testimony of record applicants.

As recently as 2003 the IGFA was deceived by one of its own representatives when Xavier Molina filed a properly-witnessed record application stating that he had landed a 154 pound tarpon on 6 pound test tippet, thereby besting Stu Apte’s 25-year-old record and laying claim to one of the most time-honored records in saltwater fly fishing (source: Flyfisherman.com, 12-2-03).
Molina achieved this fraud while still working as an IGFA official judging a tarpon fishing tournament. Following the tournament, Molina posed for a picture with another angler’s catch - one taken with conventional tackle - using 50 pound-test line. According to Molina’s application, he caught the fish in the Temascal Lagoon while fishing for baby tarpon with a group of friends.

After his record was approved by the IGFA and the photo of Molina standing next to his catch became highly publicized, members of the Veracruz Yacht Club recognized the tarpon, the dock, and the weigh scale, and wrote a letter to the IGFA informing them that Molina was not on the Temascal Lagoon June 6, but actually 300 kilometers away in Veracruz, having his picture taken with someone else's fish.

According to Mike Leech, ambassador at large and former president of the IGFA, “The two-page form required for record applications was filled out properly by Molina, along with the name and contact information for an eyewitness.”

Returning again to the 1949 Spray fish, it is clear that Spray could not have accomplished his own record fraud without the benefit of this kind of perjured eyewitness testimony.

We now know that the current NFWFHF All-Tackle Record Muskellunge, freshly caught, measured 53.6” +/- 1/5” – a trophy muskellunge, surely, but just as surely a far cry from the 63.5” claimed in sworn affidavits.

It is hard to imagine that longtime Spray associate Nixon Barnes could have done other than perjure himself when claiming to have personally measured this fish and found it, “5’ 4” long.” It is likewise hard to imagine that George Quentmeyer and Ted Hagg made an honest mistake when swearing to a, “69lb 11 ounces muskie weighed, above date (10/20/49), 63.5” in length, 31.25” in girth.”

**CASE STUDY THREE - Larry Mays**

3. Eyewitnesses can be influenced

“*People are very suggestible...we just don’t remember what we see.*”

- Steven Duke, Professor, Yale Law School

In 2002, Larry Mays of Indiana was released from prison after spending 21 years behind bars for the rape of a gas station cashier when DNA evidence finally proved Mays innocent of the crime. The victim in this case had initially failed to identify Mays in two separate lineups, and picked him out finally only after she was hypnotized by police.

In 1996, the U.S. Department of Justice released a report after analyzing 28 cases of DNA exonerations which concluded that 80 percent of these innocent people had been convicted because of faulty eyewitness testimony. As a result of these findings, the
Justice Department came up with a new set of guidelines entitled *Eyewitness Evidence: A Guide for Law Enforcement*. This publication set forth national guidelines for the collection and preservation of eyewitness evidence, and includes recommendations such as asking open-ended questions, not interrupting eye-witness’s responses, and avoiding leading questions.

Returning once again to Mr. Ramsell’s “Review of Louie Spray Affidavits, the impact of what Ramsell accurately terms, “common themes and obvious preparation” which indicate, “preparation by a single person” becomes readily apparent. A question immediately arises as to exactly whose “memory” (Inez Spray’s?) is being sworn to in these leading documents.

Interestingly, it is here where we feel that history may be allowed to take a kinder view upon postmaster Jack Reinke than can be afforded to the other primary signatories to Spray’s 1949 record fraud.

Mr. Ramsell points out that in fact Jack Reinke’s affidavit was not dated until October 28, 1949, eight days after the catch, and was pre-prepared by Mr. Spray or his wife, Inez. Doubtless, the 1949 fish was, “…the largest muskellunge that (Reinke) had ever seen” (how many fish visit the post office in any era?). Further, unlike the other primary signatories to Spray’s 1949 record fraud, it is unclear what Reinke stood to gain personally by intentionally seeking to defraud the record-keeping bodies of his day.

It is our feeling that Reinke most likely simply signed what Spray placed in front of him eight days later. That if Reinke was indeed present at the “late night weigh-in,” he was duped by Spray and his associates into witnessing a loaded fish that pushed the scales to 69lbs, 11oz, and could not have personally have put an accurate tape measure to anything.

Again, admittedly, this last line of reasoning is highly speculative, and relies heavily upon our basic assumption of the general good character of the vast majority of the people of Hayward in Spray’s day. At any rate, it is clear that either Mr. Reinke was deceived by Spray and his associates, or committed perjury. Given a choice, we would much rather err toward the former.
On Spray and Perjury

It is abundantly clear by this point that Spray and his associates had few, if any, qualms about testifying falsely under oath, a fact heretofore indirectly attested to by the shameful degree to which sworn statements made by the primary signatories to the 1949 record stand in direct conflict with conclusive evidence to the contrary.

A direct example of the willingness of Spray and his associates to testify falsely under oath may be found in the well-known controversy over Fleming’s Bar, the spot on the Chippewa Flowage where Spray to his grave insisted he caught the 1949 FWFHF All Tackle World Record. Let us take a moment to explore this issue further as it addresses the heart of the supposed “mountain” of eyewitness evidence that has long been alleged to offer indisputable proof for the Spray records.

Interestingly, this aspect of Spray’s perjury originally came to light as far back as 1949 in the wake of Tony Burmek’s famous statement that he had been fishing on Flemings Bar from “3 p.m. till dark” on Thursday, October 20, 1949, and “did not see Louis Spray” (Milwaukee Journal, 11-12-1949).

Spray apologists have long attempted to rationalize the historical significance of Burmek’s highly damaging statement by offering that Spray’s lie represented nothing greater than a champion angler’s failed attempt at protecting a prized fishing hole.

If so, after having been “called out” by Burmek in late October, 1949, it would have been perfectly reasonable for Spray to have admitted to the angling public that he had simply been protecting his spot from unwanted competition. After all, he supposedly had witnesses from Indian Trail Resort (see below) willing to verify this amended account of what transpired on the Flowage on October 20.

Instead, Spray, until eighty-one years of age, held firm to his original story, maintaining to his death that in fact Burmek was the liar, stating that, “…it was impossible for him (Burmek) to have been at Fleming’s Bar, where I caught the fish at any time on October 20” (Wisconsin Sportsman, January/February 1981).

Most will agree with the commonsense assessment that a decent and honest man would never have gone to such great lengths to brand Burmek a liar over the simple location of capture unless perceiving himself at risk of being found guilty of far greater perjuries should he not eradicate this threat to his good name.

Consider the fact that Tony Burmek - a highly respected local angler and guide, a man who, unlike Spray, had nothing to gain and, clearly, plenty to lose - nonetheless publicly called Spray, Hagg and Quentmeyer liars…and, unlike Spray, was willing to back it up.
In 1949, a public lie detector test was arranged by local media in an attempt to settle this dispute. Tony Burmek chose to attend, describing himself as being willing to “…answer honestly and to the best of my knowledge any question put to me about these fish…because as a guide, one of the major requisites is to teach our fellow fisher-men good honest sportsmanship.” (Milwaukee Journal, 11-12-1949).

Spray, however, was noticeably absent from this unique opportunity to very publicly make his case against Burmek. Nevertheless, he doggedly persisted in calling Burmek a liar for the rest of his days, and went to his grave still clinging to Fleming’s Bar – the one spot in Hayward Bermek knew Spray could not have visited on October 20, 1949 – as the only site of capture for the 1949 All Tackle World Record.

Now, if one finds Mr. Burmek’s statement credible, it is further necessary to accept that Ted Hagg and George Quentmeyer perjured themselves in supporting Spray’s Fleming’s Bar account. In fact, it is a matter of historical record that Quentmeyer even “jumped” Burmek over the accusation in Spray’s defense (A Compendium of Musky Angling History, 2nd edition, pp 249).

In stark contrast to the above, let’s consider for a moment an affidavit sworn to by Elmer Germanson, an alleged bystander and firsthand witness to this controversy, who went on record stating that Burmek could not have been anywhere near Fleming’s Bar on October 20, 1949 because he himself talked to Burmek on and off all day some four miles north on Pine Point: “That he knows of his own personal knowledge that Tony Burmek couldn’t have been anywhere near Fleming’s Bar on the Chippewa Flowage during the afternoon of October 20th” (Elmer Germanson affidavit, A Compendium of Musky Angling History, 2nd edition, pp 248).

At first glance the Germanson affidavit would appear to offer solid testimony in support of Spray’s Fleming’s Bar account. However no lesser expert than John Dettloff was apparently told by a “source” that Germanson was paid off by Spray in exchange for writing a patently false affidavit: “One source told me that Germanson was given an outboard motor by Spray in exchange for making affidavits negating Tony Burmek’s statement” (A Compendium of Musky Angling History, 2nd edition, pp. 253).

We are left with scant reason to believe that Burmek lied about fishing near Fleming’s Bar on that fateful afternoon, and even less to suggest that Spray, Hagg, and Quentmeyer told the truth. In sum it would appear that Spray, Hagg and Quentmeyer (1) were not there, (2) lied about it and (3) when caught in a boldfaced lie (4) deepened the lie by recruiting others to perjure themselves against Mr. Burmek, the one honest man with nothing to gain and nothing to hide regarding where he was and what he did or did not do on Fleming’s Bar, October 20, 1949.

A final eyewitness statement supports Mr. Burmek’s account, and should likely be considered the last word in a long-standing argument.
Mr. Jess Ross clearly remembered that no boat was fishing on Fleming’s Bar on that fateful afternoon: “Therefore, if Spray did catch the fish, I know he didn’t catch it on Fleming’s Bar” (*A Compendium of Musky Angling History*, 2nd edition, pp 253, document 1).

Taken together, the Burmek and Ross statements serve to definitively answer the question of whether or not Spray and the other principal signatories to the current FWFFH All Tackle World Record were willing to commit perjury, a fact which in and of itself would seem to contravene any discussion of the true nature of Mr. Spray’s character.

**On Spray and the July 1991 Hearsay Affidavits**

Interestingly, affidavits of unclear origin used to support the 1949 Spray record claims continued to be collected at intervals over the next thirty years, stretching well beyond the actual lifespan of alleged witnesses to Spray’s catch. This phenomenon was made possible by the use of hearsay, or secondhand affidavits in which relatives and friends of the supposed witnesses made sworn statements testifying to their own personal memories of statements allegedly made by the deceased.

At best, these statements are of a kind inadmissible in a court of law, as they are in clear violation of the hearsay rule. At worst, they represent simple gossip, and as such do not possess anywhere near the level of credibility necessary to be taken seriously to qualify as supporting documentation for the 1949 record.

As such, we feel it valuable to draw the reader’s attention to select portions of these “hearsay affidavits” reprinted below, which may be found in their entirety at the National Freshwater Fishing Hall of Fame, Hayward, Wisconsin.

**Document 5**: “That Don told him that he knew something was going on near the graveyard point area because for weeks he saw Louie Spray working the whole area, across the lake from the resort. On the day Louie caught his 69#, 11 oz. muskie, Oct. 20th, just behind the point - just out of sight - Northeast of the point, Don heard an awful commotion - shouts and two or three gunshots. He saw Spray’s boat go racing out from behind the point and off into the distance toward Herman’s landing. Don said Spray did stop in at his resort (Indian Trail) sometime that day” (Don Hendee, owner of Indian Trail Resort, 1944-1952, alleged speaker; Arnold Hendee affidavit).

First, one must consider the rather obvious physical improbability of a 1940’s-era wooden boat powered only by a single low horsepower motor “racing” anywhere, much less doing so while loaded down with three men, their tackle, and a 70lb muskellunge. Next, we find it curious that Arnold Hendee remembers Don relating only a rather vague timetable of the days’ events, including the open-ended statement that Spray visited his
resort at “sometime that day,” and not mere minutes before this incident allegedly took place.

In Spray’s own words, “it seemed like no time until old Chin Whiskers hit” (Dettloff, John, *Three Record Muskies in His Day*, pp. 198). Given Spray’s own problematic timetable for the days’ events (see Spray timeline elsewhere), the elder Hendee should have described how he had literally watched Spray and company motor away from his resort and straightaway hook the 1949 record, instead of (allegedly) stating only that he had heard, “shouts and two or three gunshots” somewhere off in the distance.

**Document 6:** “John Bennett told me that during the fall of 1949 he observed Louie Spray working the shoreline of the big island across the lake from Indian Trail - day in and day out, back and forth everyday. On the day that Louie caught the world record 69#, 11 oz muskie, John - watching from Indian Trail Resort - observed Louie and his 2 companions as they first tied into the fish, seeing a big splash of water at one point. The fish seemed to do a lot of traveling, taking their boat behind the island across the lake - just out of sight. They finished playing the fish there and, a short time later, started their motor emerging out from behind the island, once again out into view. Off they went around the bend and off with the fish”. (John Bennett, Indian Train Resort employee, 1940s and early 1950s, alleged speaker; Roger Thayer, Hayward area cook, affidavit).

Again, we have an alleged statement made by a witness who should have seen or perhaps even spoken with members of the Spray party mere moments before they “tied into the fish,” which nonetheless lacks this critical detail. We also find it odd that Spray, who allegedly had this fish “spotted” for some time and knew exactly where he was going to fish, did not simply rent a boat from Indian Trail Resort and spare himself and crew a chilly open boat ride on, according to Spray, “…a cold, damp, foggy, dismal day, with temperatures in the 40’s and a steady drizzle almost turning into snow. A strong northeast wind had blown up and it was generally nasty weather;” (Dettloff, John, *Three Record Muskies in His Day*, pp. 197).

**Document 7:** “They knew he had something spotted in the general area, out in front of our resort. Don said that for several weeks, almost every single day, he spotted Spray fishing the area. On the afternoon of October 20, 1949 John, Chick, and Don heard the commotion of shouts and gunshots coming from Spray’s boat, which was just behind the island across the lake. Their boat was just out of view because it was just around the corner on the other side of Graveyard Point. They knew it was Spray because after they boated the fish, they could see Spray’s boat come tearing out from behind the point, out into view, and off in the direction of Herman’s landing.” (Elise Hornewer, owner, Indian Trail Resort, 1952-63, alleged speaker; John Bennett affidavit).

Again, we find it odd that not one hearsay witness remembers the Spray party leaving the resort immediately prior to the events described above. From the witnesses’ point of view, this would represent an obvious and essential element of their story that would
likely not quickly have been forgotten. And yet all somehow uniformly remember Spray’s heavy wooden boat “tearing” out from behind the point, all allegedly using this same, highly distinct verbiage in a manner which echoes the “common themes and obvious formatting” so prevalent within the bulk of the Spray affidavits.

Upon closer scrutiny it becomes readily apparent that these three individuals (after telling someone else, who told someone else) bear witness only to having heard some noise and seen a particularly fast boat for 1949. To the members of the WRMA, we feel at least one of them should have said something to the effect of, “I am positive it was Spray in the boat because I talked to him only minutes before when he was at our resort”.

It has often been said that “hindsight is 20/20”. Looking back, it would be easy to criticize the collector of these hearsay affidavits as exercising poor judgment in their collection.

Noted Sawyer County Historian John Dettloff offers this advice to would-be historians:

“To the WRMA or anyone who does historical research, the goal should always be to work only with facts in an effort to learn the truth…to conduct their research by working only with facts, and not allowing any speculation, rumor, and personal prejudices to influence their conclusions.”

- www.muskyhunter.com, 10/1/04
An Investigative Profile of Louie Spray, 1938-1939:
Toward establishing motive, intent and behavioral patterns,
Leading up to and including the 1949 All Tackle World Record

The members of the WRMA have compiled this brief summary of Louie Spray’s reported 1938-39 muskellunge catches, focusing on Spray’s contest history prior to 1940, in order to establish motive, intent and pattern of fraudulent behavior prior to Mr. Spray’s 1940 and 1949 record applications.

Though largely circumstantial, we feel that the following analysis, when viewed within the context of the hard evidence presented earlier in this report, sheds much needed light upon the crooked path walked by Spray during the course of his fishing career, and still more pressing evidence against Spray’s legacy of bogus record claims.

After boating, “…not a single Muskie from 1935 through the middle of 1938” (Dettloff, John, Three Record Muskies in His Day, pp. 150), Spray suddenly laid claim to an unprecedented run of huge muskies, culminating with his first world record claim of 59lb, 8oz on July 27, 1939.

Interestingly, Spray claimed to have caught the 1939 record (Duluth Herald, 8-3-39) the very same week of his prize-winning 46lb 3oz Fitger Brewing Contest fish; thereafter, the only remaining documented Spray contest claims targeted world records in 40 and 49.

On the surface, this feat would appear to represent a near-miraculous turn of fortune for an unlucky angler who had recently endured a three-year stretch without so much as a single 30” muskie to his credit. Upon closer scrutiny however, Spray’s track record during this time period would seem to tell a different story - serving instead to document the emergence of a clever and successful liar, cheat and con artist.

Documented Claims:

8-12-1938: Fitger Brewing Contest; 38 lb, 4oz; Widmer Smith recorded as fishing partner and witness to the catch. (Dettloff, John, Three Muskies in His Day, pp 152; Fitger Brewing Company letter to L. Spray, August 12, 1938*).

It is important to note that in this same year Widmer Smith, with a 48lb entry, took 1st place in the vaunted Field & Stream annual fishing contest. Years later Smith not only, “…admitted to a friend…that he had shot that fish from a bridge after he had seen it in the shallows, but there is strong evidence that Widmer padded its weight as well,” (Dettloff, John, Three Record Muskies in His Day, pp. 152; Sawyer County Gazette, August 11, 1938; Sawyer County Gazette, July 27, 1939).

In other words, Spray’s close friend and principal witness to a world record contest entry was a man who, by his own admission, sought personal gain by successfully defrauding the largest established fishing contest in the United States.
It is of further significance to note that Smith, a self-admitted fraud, was said to be in the company of Spray at the time of his “catch,” and undoubtedly claimed Spray as a witness to his fraudulent 48lb, 7oz contest entry. Thus it can be fairly said that Spray’s 38lb, 4oz Fitger Brewing Contest fish marks the beginning of a long and winding trail of highly suspicious assertions and circumstances that Spray followed en route to his 1939, 1940 and 1949 world record claims.

These same two men – Louie Spray and Widmer Smith - would soon thereafter comprise half of the primary signatories to Spray’s 1939 world record claim, one which followed Smith’s admittedly fraudulent Field & Stream contest entry by less than one year.

When considering the historical evidence said to support Spray’s 1939 claim comprises only: (1) a single photograph, not of Spray but of another man holding a large muskellunge (Spray’s photographs “lost” and, somehow, never retaken); (2) a (badly) augmented mount (also lost, destroyed in a fire in 1959); and (3) the sworn testimony of Smith and Spray, then the logical question of whether Smith vouched for Spray’s 1939 record as *quid pro quo* for earlier favors is of no trivial importance.

**9-16-1938:** Fitger Brewing Contest; 42 pound 6 ounces. This contest entry could very well represent the beginning of Spray’s legacy of photographic “mix-ups”. Spray himself identified and hand labeled an alleged photograph of his 1940 record fish as one instead depicting a “42 pounder” (Latvaitis, Brad, *Musky Hunter* June/July 1998, “How Big Was That Musky,” pp. 58; Fitger Brewing Company letter to L. Spray, Sept. 16, 1938*).

Mr. Latvaitis goes on to state his explosive contention that, “…we may not have an actual photo of the fish” (1940 FWFHF World Record). Later in this same article Latvaitis dubs this new-found evidence a “smoldering gun” photograph of a fish he estimates to fall somewhere in the mid-50” range – an estimate well in line with the DCM photo analysis and WRMA Visualization Experiment ranges.

Later in this same article (pp. 59), Latvaitis would appear to question current FWFHF President John Dettloff’s analysis of this photograph when stating, “Interestingly, he (Dettloff) also contends that perspective calculations and distortion analysis support the 61-pound 13 ounce weight”.

In all fairness to Mr. Dettloff, this analysis occurred at a time when Mr. Spray was thought to possess a, “6-foot 2-inch height and broad lumberjack’s frame” (*Musky Hunter* Magazine, April/May 1996, pp. 29), and not the 5’11” height and relatively average weight that we now know represents Spray’s true size in the 1930’s and early 1940s.

Nonetheless, this statement on the part of Latvaitis strongly implies that Mr. Dettloff did rely upon photo analysis to calculate the size of this particular fish, and most certainly
would lead one to conclude that the current FWFHF President believes in and uses photo analysis as a valid means to help establish or discredit a world record.

Returning to the photograph of the “42 pounder” identified by Spray as his 1940 world record, it is unknown if the photograph of the 1940 fish was used to substantiate the 42lb, 6oz 9-16-1938 Fitger Brewing Claim, or if Spray merely meant to hand label the alleged photograph of his 1940 record as one depicting a muskellunge weighing 42lbs.

In sixty-five plus years that have passed since this claim was originally made, no other picture of a 42lb-class Spray fish has surfaced; in fact, over the course of our investigation we were only able to locate this 42lb, 6oz contest entry. Needless to say, this “mix-up” is quite curious, and leads one to question whether Spray used a single photograph of a muskellunge specimen weighing approximately 42lbs for several different contest/record applications.

Furthermore, we find the fact that this “mix-up” involves Spray’s 1940 record claim carries with it strong overtones of the Lawton “smoking gun” photograph. While it is certainly within the realm of possibility, we at the WRMA feel it a greater likelihood that a muskie angler be unable to properly identify pictures of his own children before being unable to distinguish an alleged photograph of his second world record fish from one supposedly representing a significantly smaller specimen.

To grasp the true import of just this singular Spray photographic “mix-up” one must first acknowledge the relatively small total number of muskellunge of this size claimed by Spray during the course of his “Muskie Days.” Of these, the WRMA has only been able to locate five photographed fish claimed by Spray to have weighed more than forty pounds: 41-8; 46-3; 59-8 (1939 WR); 61-13 (1940 WR); 69-11 (1949 WR).

In other words, Spray did not make this “error” of identification from among hundreds of muskellunge photos. It is hard to believe that Spray - a relentless self-promoter – would not have taken the time to photograph other large muskellunge specimens had they in fact existed. Further, there is only one picture of the 1939 record being held by another man and only one photo (at the time) of the 1940 claimed record (two surfaced later, one of which Spray had already labeled as 42 lbs.) and only three photos of the 1949 record in sequence – and those taken from behind a building.

6-?-1939: Photo pp. 153, Dettloff, John, *Three Record Muskies in His Day*, top left of page. The caption for the photo in question reads: “Louie Holding a muskie that he caught out of Blaisdell Lake in 1939, which reportedly tipped the scales at 41 ½ pounds.”

We assume Mr. Dettloff had good reason to have later relabeled this photograph as 41 ½ pounds because it also appears in Spray’s *My Muskie Days* (pp.7) with the caption, “Lou Spray with a 24 pounder, 1924”.

It is painfully clear to the naked eye (and, perhaps, the motivation behind Mr. Dettloff’s use of the word, “reportedly”) that this fish comes nowhere close to weighing 41 ½
pounds without the benefit of adding some form of artificial weight. The fact that Spray himself labeled it as 24 lbs speaks volumes regarding the actual size of the fish.

Per muskie historian John Dettloff:

“Loading up a muskie with artificial weight was a common practice among muskie fisherman back then. Whether to win a local fishing contest or for personal bragging rights, muskies were often filled up with water; had suckers crammed down their throats; and had their weights augmented with sash weights, coke bottles filled with sand, and other forms of artificial weight. Old time taxidermists have attested to this fact many times. An abnormal relationship between a muskie’s length and its weight has always been a dead give-a-way that a muskie’s weight had been altered.” (Dettloff, John, Three Record Muskies in His Day, pp. 152).

It is important to note that this patently false claim of 41½ lb was only a few weeks before Spray’s 1939 world record entry.

In addition to the odd fact of identical photographs used to document separate 24 lb and a 41½ lb muskellunge as being one-in-the-same, it is curious that Spray appears to be wearing the same “lucky” attire he was wearing in all of the known (only 4 total) 1939 and 1940 larger claimed 40 lbs or more muskellunge photographed. The above evidence points toward the likely reality that a single series of photographs was taken by Spray within a narrow window of time and used interchangeably as the need arose to falsify his latest contest/record claim.

7-22-1939: Fitger Brewing Contest; photo pp 153, Three Record Muskies in His Day. Spray claimed this specimen to have weighed 46 lb, 3oz, and measured 52” in length. Referring to the “abnormal relationship between a muskie’s length and its weight” cited above, it is clear from even a cursory review of the photograph (in addition to what we now know about the relationship between the length and weight of large muskellunge) that it is beyond belief a specimen of this length with a medium weighed over 46 pounds. Amazingly, Spray claimed to have caught this prize-winning contest fish (reported in the Duluth Herald, 8-3-39) the same week as his 7-27-39 world record…a turn of fortune, which proves especially difficult to believe in light of the veritable cornucopia of suspicious circumstances previously cited.

7-27-1939: Fitger Brewing Contest and WR documentation; 59 lb, 9 oz. Spray claimed to have lost his camera, which is why he had only one picture of another man holding his first world record muskellunge.

First, given the fact that the fish was displayed in his bar for several days before Karl Kahman picked it up to be mounted (Three Record Muskies in His Day, pp. 159), we find no plausibility whatsoever to Spray’s “lost camera” story. Common sense would seem to
dictate that it is highly unlikely a reasonable person would not, upon discovery of the loss of so great a prize, immediately secure duplicate photographs of what would represent - for most individuals - an once-in-a-lifetime accomplishment.

Next, when considering the likelihood that Kahmann not only mounted but also substantially (and, it would appear, rather clumsily) augmented Spray’s 1939 fish during the mounting process. The highly suspicious weights of the two contest-winning fish directly before, and Spray’s close association with and frequent use of the notorious Widmer Smith as principal witness to his catch, a man who himself admitted to defrauding the 1938 Field & Stream Contest by shooting the prize-winning fish from a bridge, and the truth about Spray’s 1939 world record claim becomes clearly evident.

Not incidentally, Smith’s revelation about his “angling method” of choice may help explain yet another apparent mix-up with regard to Spray’s 1939 record.

As the story goes, Spray had two different handguns with him in the boat at the time of the capture of the 59lb, 8oz 1939 World Record, an automatic 45-Colt, and a 22-caliber, high-standard pistol.

According to Spray, while doing battle with the fish he mistakenly picked up the 45 instead of the 22, and shot the muskie after only a 10-minute fight (Three Muskies in His Day, pp. 155).

Now, when one considers that close friend, regular fishing partner, admitted fraud and trusted witness Smith likely shot his 1938 Field & Stream entry from a bridge with the help of a high-powered rifle. It is not unreasonable to conclude that Spray, needing to explain away the unusually large hole in the 1939 fish held by another man, concocted this tale to silence nonbelievers.

Like any criminal, Spray would learn from his early mistakes (“guessing contest” as remedy for highly suspicious 1939 affidavits, improved taxidermist augmentation as remedy for bizarre appearance of 1939 mount, etc.) to make more fraudulent record claims, up to and including the current FWFHF All-Tackle World Record in 1949.

**Additional Suspect Claims/ Photographic “Mix Ups”:**

**8-24-39:** A letter to Spray from the Fitger Brewing Company* on this date makes mention of a 52lb muskie, apparently referencing a fish mentioned in a previous letter sent to Fitger by Spray

It is safe to assume that a catch of this magnitude would have been front-page news of the local papers of Spray’s day. Interestingly, we were unable to find a single written word elsewhere about this supposed 52lb specimen in the historical record.
In a Sawyer County Gazette article bearing this date, Spray describes his recent capture of a 48lb, 8oz muskie, which would likely put this reported catch as occurring sometime during the week immediately preceding his 7-27-39 world record claim.

At first, one might conclude this fish could be yet another “mix up” involving the same 46lb, 3oz specimen used in the Fitger contest mentioned above. However, this Spray “catch” is even more intriguing due to the fact that this same article tells how he topped good friend Widmer Smith’s (again) “1938 Champion” muskie by only one ounce.

Smith’s faked contest entry was claimed to have weighed 48lb, 7oz. In other words, the 1 oz difference in reference to the Smith fish simply cannot be a misprint or typographical error. Please consider the article date: July 27, 1939. Spray was clearly referencing three fish of tremendous proportions all allegedly caught within roughly one week’s time.

The article also mentions a fish caught by Bob Mann that weighed, oddly enough, 46lb, 3oz…the exact same size as the specimen Spray entered in the Fitger contest. Incidentally, this would have tied Bob Mann and Louie Spray for top honors if not for the 48lb 8oz fish mentioned in the article.

We at the WRMA have yet to resolve these particular inconsistencies in the historical record to our own satisfaction. To review: Spray’s claims are now 59, 52, 48, 46, 42, 41 and 38 pound muskellunge, all in less than one year’s time.

When one considers the scant hard photographic evidence said to support these claims comprises only: (1) the above photographic “mix up’s;” (2) one solitary picture said to represent a 46 pound muskie; (3) another solitary picture supposedly representing a 41 pound specimen (each obviously augmented) and (4) a single, extreme low angle photograph of the 1939 world record being held by another man. It quickly becomes incredibly difficult for a rational person to accept Spray’s tales at face value.

To say the least, this represents a truly incredible collection of extraordinary muskellunge claimed by Spray, all coming within a very narrow window of time. We now know that trophy muskellunge of this size are not, and have never been, commonplace catches, in any era or geographic region.

A true forty-pound catch was a rare and wonderful occurrence in the Hayward of Spray’s day. Considering that Mr. Spray went three full years without so much as a single muskie, his claim of catching multiple “once in a lifetime” specimens - within a very narrow band of opportunity, under highly suspicious circumstances – asks far too much of the muskie hunting community to be taken seriously as representing anything beyond a view into the opportunistic nature of an unscrupulous criminal.

**Loading Fish a “Common Practice”**
In a 1998 article referencing the then-recent Chippewa Flowage Musky Study penned by Mr. John Dettloff entitled, “Putting Myths in Their Place,” featured on Craig Sandal’s web sites *Musky America* or *Muskies Gone Wild*, Dettloff states the following:

“By around 1938, trophy Musky began to show up with more regularity. From then on, specimens 40# and over were known to be caught on occasion. To date, since the flowage was first created 75 years ago, some 60 Musky over 40# have been caught—at least 8 of which were in the 45 pound class or better. While this number still represents a rather impressive tally, it is important to note that originally more big fish were believed to have been caught out of the flowage…but, as it turns out, a number of them now prove to have been exaggerated. Besides the current world record Musky which was taken out of the flowage in 1949, there have been only two other 50 pound plus Musky documented to have come out of the Chippewa Flowage. (Note: a 51 pounder did come from Chief Lake in 1946, before the flowage was formed) There were tales of a couple of other 50 pounders that were taken from the flowage, but now there are strong indications that they too were exaggerated in size.

A substantial effort to overstate the sizes of a number of the flowage’s big Musky catches for publicity purposes during the ‘40s and ‘50s has seriously distorted the perceptions of many who are now trying to assess the fishery and look back to compare today’s realities to yesterday’s exaggerations. Keep in mind that today the flowage is still producing decent numbers of mid-30 pound fish, but a number of these very same fish would have been counted as being over 40 pounds years ago because of the tendency to exaggerate.” (John Dettoff 1998)

According to Dettloff, no less than half of the claimed 50 lb muskies from the Flowage during the 40s and 50s were “exaggerated in size.”

Strangely, Mr. Dettloff’s poignant observations referencing so many of the supposedly large fish from this era somehow did not move this historian to apply this same standard of scrutiny to the Spray fish which, after all, also came from this same time period and geographical region.

However, we at the WRMA would like to point to this *era of embellishment* for the Chippewa Flowage as yet additional circumstantial evidence one must unavoidably consider when evaluating Spray’s various contest/record claims.

Nonetheless - as has been said at various points elsewhere in this report - we at the WRMA are confident that this sad fact does not work to discredit the good names of the vast majority of the people of this time period or who witnessed Spray’s fish.

Take for example the statement made by Rose Martin who, according to both her own statements and what has long been held by the historical record, only weighed Spray’s 1939 world record, and did not take part in nor witness the measuring of the fish. As such, given (1) the DCM photo analysis, (2) the conclusive findings of the WRMA
Visualization Experiment, (3) taxidermist and mount augmentation analysis and (4) highly suspicious circumstances surrounding this 1939 and other Spray catches, we are supremely confident that a young and perfectly innocent Rose Martin was asked without consent or prior knowledge to weigh what was in fact a heavily loaded fish.

*Please note:* The bumps in the following picture of Spray’s 1940 world record are consistent with what one would expect to see from a heavily loaded fish.

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**Still More Spray Photo “Mix Ups”**

Taken at face value and viewed separately, the following Spray photo “mix-ups” might appear of no real consequence. However, when considering the previously referenced Spray photo “mix ups,” the fraudulent nature of Spray’s record claims becomes even more readily apparent.

1) The 1940 fish may be found listed as the 1949 record and the 1949 fish listed as the 1940 record on Spray’s personal stationary. When questioned by Larry Ramsell himself, Spray explained this apparent “mix up” as representing a simple printer’s mistake.

2) The identical reversal is also found on Spray’s post cards. When questioned about this related “mix up,” Spray again ascribed it to a second “printer’s mistake.”

This begs the question: if these photo “mix ups” involving all-important world record fish were caused by the printer, why not return them to the responsible party and have the necessary corrections made?

When pressed on this point by Ramsell, Spray reportedly explained that since the post cards were already printed up, rather than have the printer fix his mistake(s), he decided instead to just go ahead and use/sell them “as is,” with his all-important record muskies listed incorrectly.
Then again…

3) We found this identical reversal while examining Spray’s *My Muskie Days* (Spray, Louie, pp. 6). In contrast with *Three Muskies in His Day* and other secondhand accounts of the “era of embellishment” on the Chippewa Flowage previously described, *My Muskie Days* represents a primary source of historical evidence, one which offers, among other topics, an autobiographical account of Spray’s record catches.

This time the reversal in question was contained in a photo collage of Spray’s record muskies prepared by Spray himself. Of particular interest: each picture is separately hand-labeled, thus removing any possibility of a “printer’s mistake” being responsible for this strange “mix up.”

**Possible explanation:**

It would appear a reasonable explanation for the above that at some point after 1949, Mr. Spray decided that the 1940 low angle fish photo looked larger than the 1949 fish and started interchanging them – just as he had previously done with other muskie pictures.

In the collage, the 1940 and 1949 reversal is hand labeled (no doubt by Spray himself). As noted above, this incorrect labeling is recorded in his own book, and on the collage. This simply cannot be explained away one more time as any type of printer’s mistake, as in the case of the Spray stationary and post cards.

Taken together, this series of photographic “mix ups” strongly suggests a deliberate act on the part of Spray.

It is just not plausible that this exact “mix up” would occur in three separate places, one of which being an autobiographical account involving a hand-labeled photo collage, without the author’s knowledge and intent.

Additionally…

4) Of great interest is the appearance of this same collage in *A Compendium of Musky Angling History* (Ramsell, Larry, second addition, pp. 252), only this time the hand-written labeling present in *My Muskie Days* appears to have been “switched” or at the very least corrected.

The chapter in which this collage re-appears is entitled “In Defense of Louie Spray,” and was authored not by Mr. Ramsell but instead by FHWFH President, John Dettloff.
Obviously, at some point of time between the release of Spray’s *My Muskie Days* and the printing of the second compendium, someone corrected this most bizarre and intriguing “mix-up”.

**Motivation:**

Mr. Spray received a considerable amount of cash and prizes for his various contest winnings and world record claims. His 1939 record alone netted him a cash prize of $3,000. To adjust this sum (a mere fraction of Spray’s total contest/record winnings) to reflect 2005-dollar values (Consumer Price Index, 1800-2005), this single cash prize would today represent over $23,000.00.

This small fortune, when viewed against a backdrop of the economically depressed Hayward of the 1930s, provides ample motive for Mr. Spray’s criminal doings. This amount, which does not take into account what was derived from the Fitger Contest, in addition to increased bar business due to Spray’s newfound notoriety and publicly-displayed record muskellunge mounts.

Clearly, Mr. Spray enjoyed a muskie-related financial windfall in 1939 alone, again only one season removed from being unable to land so much as a single 30” muskie for three years previous. All evidence points to Mr. Spray discovering an easy means to defraud his way into unearned contest money, prizes and extra bar business.

We were unable to determine the first place prize amount awarded for the capture of the 1940 world record. However, we do know that in 1949 a new car was just one of the rewards one could receive for setting a new all-tackle muskellunge world record.

At any rate, it is now time that a more accurate portrayal of Mr. Spray’s character be brought into the historical record.

Here we have clearly identified the motives behind Spray’s multiple contest/record frauds: money, fame, cash and other prizes, and the promotion of his bar business.

In sum, it is our considered opinion that Spray’s July, 1939 world record claim represents the awkward first steps of an incredible cheat who discovered a system to turn large muskellunge into cold hard cash.
**Conclusion:**

While the past may not always directly predict the future, we feel in Spray’s case that his actions up to and including the 1939 world record application make for compelling evidence which points to the Spray all tackle 1949 World Record being completely bogus.

**Afterword:**

It is almost comical to note that Spray even lied in claiming “Three Record Muskies” on his tombstone. At the time of his death, Spray was credited with only two.

Although at first seemingly insignificant, in addition to demonstrating that Spray’s propensity to lie extended beyond his natural life span, this observation explains one of the most obvious falsehoods found in Spray’s “My Muskie Days,” in which Spray claims to have had the 1940 fish “on ice” Memorial Day of 1940, and was therefore himself cheated out of being the only person to have held the record three times.

According to Spray: “The facts are that this fish (1940 WR) was on display at Spray’s Bar, Hayward, Wisconsin on Memorial Day (last day of May) 1940, (actual date was 8-19-40) packed with ice for everybody to view. It’s hell to get cheated out of a Record Muskie, especially when it would have made me the only person in the world to date, to have broken the record three times” (“My Muskie Days”, pp. 15).

This was a direct reference to Percy Haver who, like Spray, was at the time also credited with two world record muskie catches. The reference above was to Haver’s (then) 62 ½ lb WR from 6-28-40.

In other words, Spray – years later, still bitter and himself a master cheater - falsely claimed that the 1940 fish was indeed a world record, still chafed by the fact that Haver had out-cheated him so many years before.

*On file at FWFHF.*
Summary and Recommendations

“Spray, and most musky fishermen for that matter, were far from jealous about the Lawton musky. They just wanted to be convinced that the musky was legitimate. It’s not necessarily WHO holds the world record musky title that’s important, rather that the record is accurate”

-Dettloff, John, “Lawton World Record Overturned,” Musky Hunter Magazine

It is hard to believe that it has been over a decade now since Art Lawton’s 69lb 15oz former All Tackle World Record came under intense and independent scrutiny by current FWFHF President, Mr. John Dettloff. The fact that Mr. Dettloff was able to collect new and valuable information disqualifying not only this record, but all of the Lawton records, in addition to the Hartman, Hanser and Haver historical records has certainly set a standard for independent and unbiased muskellunge research that the WRMA has striven to follow.

The evidence presented thus far in this report has shown conclusively that Spray falsified all of his various world record and contest entries, most notably the current FWFHF All Tackle Record Muskellunge.

To Review:

From all of the expert calculations employed, it is evident that Spray’s 1949 FHFHF All Tackle Record Muskellunge, initially claimed to measure 63.5” in length by 31.25” in girth, in fact measured 53.6” +/- 1.5” in length and 8.7” +/- 0.5” in width, and therefore sorely lacked the dimensions necessary to weigh 69lbs, 11oz without having first been, in the words of Karl Kahman, “filled before weighing”.

Further, it has been shown conclusively that the skin mount of Spray’s 1949 FHFFH All Tackle Record Muskellunge was augmented by an average of 14.47% in length, and 8.51% in belly width. It is our considered opinion that should one for whatever reason choose to ignore the results of the 1949 photo analysis, it is nonetheless necessary to conclude, as have we, that mount augmentation of this magnitude could only have been performed to help perpetuate a fraud of historic proportions on the part of Spray.

Lastly, it has been demonstrated that the documentation long said to support the 1949 All Tackle Record Muskellunge lacks the necessary credibility to be of any assistance in authenticating Spray’s fraudulent 1949 record claim. Moving forward, it is clear that for record keepers, scientific analysis must trump eyewitness testimony whenever the two stand in conflict. This is not to say that eyewitness testimony lacks value. However, just as in courtrooms of today, it is necessary to recognize that eyewitness testimony has fallen to a position of secondary importance relative to hard scientific evidence.
We applaud the Hall for addressing this reality by ruling that a biologist must be on hand to evaluate stomach contents, and that photographic evidence be conclusive in order to do away with “fisherman’s liberties”. It is clear that the Hall has also recognized the many problems inherent with eyewitness testimony, and sought proactively to correct the problem.

**Conclusion:**

Given the preponderance of scientific and circumstantial evidence to the contrary, we are compelled to accept the physical impossibility of the current FWFHF All Tackle Record Muskellunge to have weighed anywhere near the 69lbs, 11oz claimed by Spray in 1949.

Therefore, **it is our recommendation that this and all Spray records be immediately disqualified from current or historic record status or consideration by the National Freshwater Fishing Hall of Fame and Museum**, as they represent obvious cases of fraud on the part of Spray and his associates.

We at the WRMA believe that the burden of establishing adequate proof for this or any angling record must fall squarely on the shoulders of the claimant in order for a record to be valid. By this test, the Spray fish not only fail, but fail miserably.

It is abundantly clear that this same burden of proof was borne by the Lawton, Hartman, Hanser and Haver records when the FWFHF ruled on the basis of Mr. Dettloff’s findings to disqualify these claims from record consideration. Furthermore, it is important to note that Ruth Lawton’s 68lb 5oz potential world record candidate was rejected by means of an *amateur’s* photo analysis alone.

We know that adding Spray’s patently false muskellunge records to the already long list of “Muskie Crimes of the Century” represents yet another historic disillusionment for the entire muskellunge community. Nonetheless, it is our hope that by authoring this report we at the WRMA have added to the overall credibility of our beloved sport, and in this spirit humbly submit our findings to the general muskie public for consideration.

**On The New 2005 FWFHF Protocol:**

Considering the WRMA is a recognized 501 (c) (3) entity by both the Internal Revenue Service and the State of Illinois, and that both governmental bodies are more than satisfied by having only two WRMA officers sign legally binding government documents, we can see no legitimate reason to fully comply with this request.
In short, the governing body of the WMRA has judged the newly-instituted FWFHF protocol requiring notarized signatures from virtually everyone contributing to this report an unnecessary waste of time, money and effort. “Notarized signatures are required from the complainant, the primary contact person and all other individuals whose testimony is included in the complainant’s report.”

We at the WRMA sincerely hope for a healthy working relationship with the Freshwater Fishing Hall of Fame in the future. Please accept this as our final report on the subject of the 1949 Spray FWFHF All Tackle World Record.

Richard Delaney, President

Jerry Newman, Trustee

Sharon M. Newman 10-10-05
Notary public

"OFFICIAL SEAL"
SHARON M. NEWMAN
Notary Public, State of Illinois
My Commission Expires 05/08/07
October 7, 2005

RE: Photo Analysis and Documentation of the Louis Spray World Record

To Whom It May Concern:

I have had an opportunity to review the documentary evidence and photo analysis that has been obtained concerning the Louis Spray World Record Muskies. I have also had an opportunity to review the statements that were provided at the time the record was recorded and statements and newspaper articles provided subsequent to the event.

It is my opinion as a trial attorney for the last 30 years and as the Past President of the Illinois Trial Lawyers, that the photo analysis provided would be admissible in a court of law and that the conclusions drawn from that photo analysis conclusively prove that photos provided of the alleged world record muskie do not represent a fish of the size stated by Louis Spray.

Sincerely,

Kim E. Presbrey