

Chapter 1A: Development of the new Bettas4all Standard® – Phase I (2010)

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This article describes the first phase of development of the new Bettas4all Standard® and will provide more information and insight regarding the motivation and background behind this new show standard for Betta splendens.

1. Introduction

Show standards of animals are in general characterized by a clear description of the various show varieties. Dimension parameters are very important as they tell us what the overall appearance of the ideal show animal should look like. When we take a look at show standards of several show breeds, for example German shepherds [1], Arabian horses [2], English budgerigars [3], goldfish [4] and guppies [5], they all include a clear description of the ideal dimensions.

The current standards for show Bettas give a clear description of ideal form and color of the various show varieties we know today. In order to describe the ideal form, these standards often use terms like “symmetry” and “balance”, but what do they mean with these words? “Symmetry” in our hobby refers to the situation where the upper and lower parts of the fish nearly form a mirror-image when an imaginary horizontal midline would be drawn. “Balance” refers to the proportion of the finnage in relation to that of the body. Here, a clear dimension parameter which indicates the ideal size of the finnage in relation to that of the body is lacking.

Previously, I discovered that the width of the anal fin could function as a suitable reference point to describe the dimensions of the finnage of a show betta [6]. In the past two years I further explored this option by studying the form and the dimension of the body and finnage of both male and female Bettas in my own fishroom, at shows and from pictures. As the width of the anal fin is depending on the body size of the fish, the advantage of taking this as a reference point is that it automatically relates the ideal finnage size to that of the body. Keep in mind that this does not mean that we have to start measuring Bettas during the judging procedure but with good training an experienced judge should be able to recognize whether a fish has the correct dimensions or not. We have used this tool to develop a new show standard.

2. Development of a new standard

The philosophy of the new Bettas4all Standard® is to promote vital, healthy, balanced show Bettas. Condition, deportment, overall balance, form of body & finnage, and color are important aspects which are incorporated into the standard. "Characteristics like extreme branching, webbing that is too voluminous (e.g. “balloon”), misaligned scales, and bad toplines (e.g “spoonhead”), are not compatible with our philosophy and will be heavily faulted.". I think one can imagine that development of a such a standard takes time and this article will discuss what we have accomplished so far in phase I of this elaborate project.

Ideally a show standard, regardless of the type, should be accompanied by clear examples which match the written text in order to enhance understanding and prevent confusion. Because the perfect fish does not exist it is very difficult to illustrate the form and dimensions written in the standard. We therefore have used a different approach. With the help of my friend Stefan George Psarakos (Australia) we developed three-dimensional (3D) models to visualize the ideal shape, balance, dimensions and proportions of the different finnage varieties of Betta splendens. But how did we approach this? We started with a longfinned symmetrical variety, the halfmoon. As our dimension parameter depends on the form and proportions of the body, we put a lot of effort into the development of a good 3D model of the body with a smooth topline and strong appearance (see **Figure 1A.1A**). Subsequently we made a dimension model for the finnage (see **Figure 1A.1B**). and from here we step by step added the caudal fin(see **Figure 1A.1C**), anal fin (see **Figure 1A.1D**), dorsal fin (see **Figure 1A.1E**), ventral and pectoral fins (see **Figure 1A.1F**).

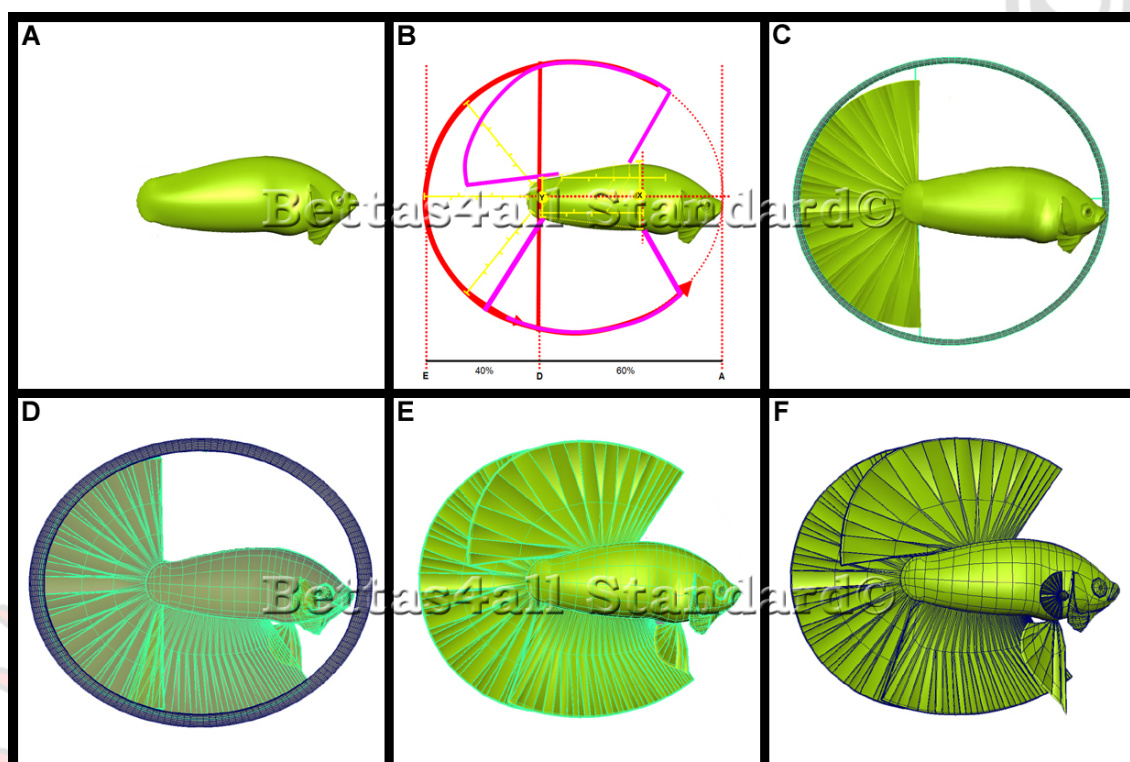


Figure 1A.1 2D representation of the different stages in development of the 3D model for the halfmoon (created by Stefan George Psarakos).

Body (A), body & finnage dimension sketch (B), modelling of the caudal fin (C), modelling of the anal fin (D), 3D model with all three unpaired fins (E) and the complete model after addition of the pectoral and ventral fins (F)

The 3D model of the body also formed the base for the development of the other finnage varieties where we followed the similar approach as described previously.

3. Finnage varieties

The Bettas4all Standard® recognizes two asymmetrical shortfin show variants (traditional plakot and asymmetrical halfmoon plakot), one symmetrical shortfin variant (symmetrical halfmoon plakot), one asymmetrical longfin variant (veiltail) and three symmetrical longfin variants (halfmoon, doubletail and crowntail). In this article we introduce the main characteristics of these different finnage standards illustrated with a 2D preview of the corresponding 3D models.

3.1 Plakot

For many years the traditional plakot was the only shortfinned type seen at betta shows but the development of the halfmoon fever also led to the evolution of the shortfinned tailtype. Outcrossing the traditional plakot type to longfinned halfmoons led to the development of the halfmoon plakot. The overall appearance of these fish is asymmetrical and combines traits of both traditional plakots and halfmoons. Besides more raysplitting in the caudal fin, the outcrossing to longfinned halfmoons also introduced more raysplitting in the anal and dorsal fins which also influenced their shape and volume. Both types have a clear asymmetrical appearance which is mainly caused by the extended rays in the rear (posterior) part of the anal fin but also by the length and shape of the ventrals and the dorsal. When breeding longfinned halfmoons the ultimate goal is a fish with a balanced appearance. The increasing interest in asymmetrical show plakots lead to the development of another plakot type, the symmetrical halfmoon plakot. This type is the shortfinned equivalent of the longfinned halfmoon and is often referred to as "shortmoon". Because we are now dealing with three different shortfinned show varieties which have been evolved from each other by years of selective breeding, this also resulted in intermediate types which are sometimes difficult to place in a certain show class. In this standard we have tried to create a clearer distinction between the traditional plakot (see **Figure 1A.2A**), the asymmetrical halfmoon plakot (see **Figure 1A.2B**) and the symmetrical halfmoon plakot (see **Figure 1A.2C**).

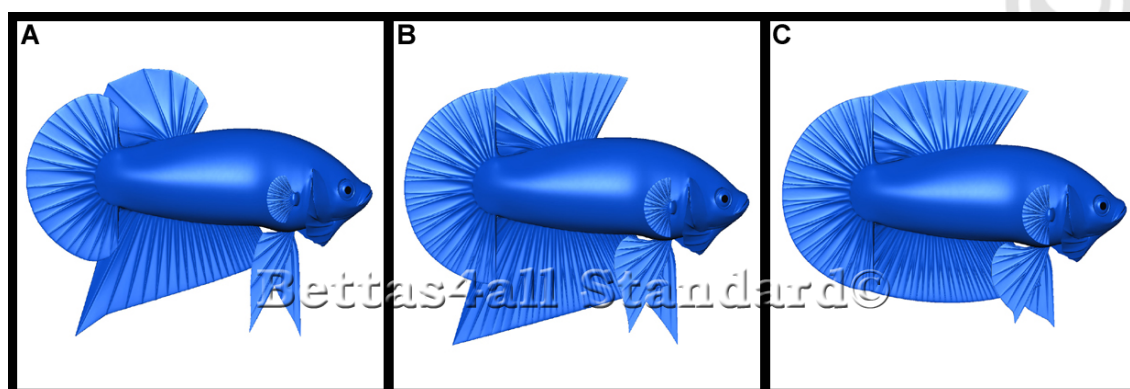


Figure 1A.2 2D representation of the 3D models of the asymmetrical and symmetrical shortfin varieties (created by Stefan George Psarakos).

Traditional plakad (A), Asymmetrical halfmoon plakad (B) and Symmetrical halfmoon plakad (C)

3.2 Veiltail

The veiltail is a form which gradually has disappeared from the class list of many international Betta shows. We personally think this is a negative development, because we should not forget that it was this variety which was the base of the development of the modern longfinned show Betta. Additionally the veiltail, without any doubt, is the most known variety of *Betta splendens* among the public. It often is this variety which is responsible for people getting “infected” with the “betta-virus”. Because the veiltail is still greatly appreciated among aquarium hobbyists and is clearly distinct from the other longfinned show Bettas we think there still should be room for this variety within the show circuit. We therefore developed a show standard for veiltails and hope that this standard will stimulate and challenge breeders to bring the current quality of the veiltail to a higher level by well-thought and dedicated breeding programs (see **Figure 1A.3A**).

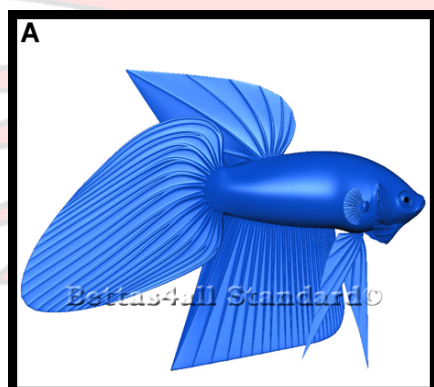


Figure 1A.3 2D representation of the 3D model of the asymmetrical longfin variety (created by Stefan George Psarakos).

Veiltail (A)

3.3 Halfmoon

Ideally the caudal fin of a halfmoon, both short- and longfinned, should have a 180 degree spread with the length of the rays being equal throughout the whole caudal. This characteristic is only found in a limited number of fish and most of the times the outer rays are shorter in length than the rays found in the midsection of the caudal fin. When judging longfinned halfmoons it is often said that the fish has an unbalanced appearance because the anal fin is too long in the back. Interestingly, in most cases it are not the rays in the anal fin which are too long but it actually are the outer rays of the caudal fin which are too short. This observation requires both breeders and judges to look with a different eye at halfmoons (see **Figure 1A.4A**).

3.4 Doubletail

The ideal doubletail can be considered as the ultimate example of symmetry of all show Bettas. Because of the broad dorsal fin which almost resembles the anal fin in both width and shape the upper part and lower part of the fish nearly are a mirror-image. In many standards doubletails are allowed to

have a shorter body. We personally feel that ideally the perfect doubletail should have a good proportioned body which is comparable to that of any singletail variant (see **Figure 1A.4B**).

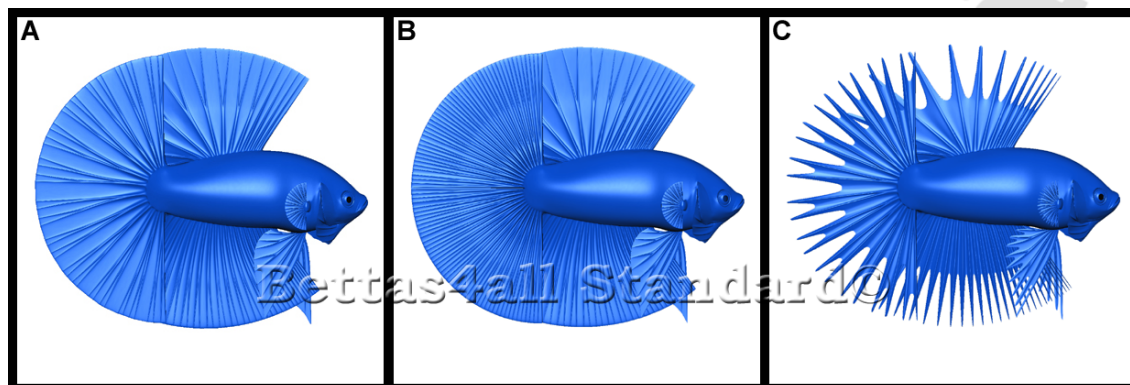


Figure 1A.4 2D representation of the 3D models of three symmetrical longfin varieties (created by Stefan George Psarakos).

Halfmoon (A), Doubletail (B) and Crowntail (C)

3.5 Crowntail

According to the Bettas4all Standard®, the ideal crowntail caudal is “double-ray (DR)” and shows a primary branching (2-ray) with a 50% reduction in webbing between the primary rays and a 25% reduction between the secondary rays thereby creating a crown-like appearance (see **Figure 1A.4C**). The dorsal and anal fin of the crowntail show a 50% reduction in webbing. We decided to choose this type because it represents a good balance between the empty spaces and remaining webbing between the rays of the fins. Two variants of this type are recognized, the normal crossray and reverse crossray.

4. Trial version

After all the hard work in the past months we are extremely proud to present this trial version of the Bettas4all Standard® to the public. This version will be used to judge the Bettas by a knock-out system at the Holland Betta Show (20 - 22 August 2010, Arcen, the Netherlands) and at the 15th EHBBC show (30 September - 3 October 2010, Duisburg, Germany). It is likely that this version of the standard still shows imperfections and after both shows we will evaluate which parts need further improvement. In Phase II, our goal is (1) to expand the standard by adding a detailed fault system for the finnage and color standards and (2) to further develop the standard for female show bettas.

So please keep your eyes open for Phase III!

Acknowledgements

I would like to thank Stefan George Psarakos (Australia, www.superbbettas.com) whose contribution is of crucial importance in the development of this new standard. His artistic skills and dedication enabled him to create 3D models of the show betta varieties, based on dimensions and diagrams I produced. I hope we can continue this collaboration for a long time!

References:

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