25) Other Views of the "Great Cubic Mandelbrot Mystery"

(In order to see the text in some illustrations, justify the size to 125%)

In this article we shall make a further investigation of the "Great Cubic Mandelbrot Mystery", presented in the previous article. This mystery was demonstrated in the image "Mystery Zoom 2b3". In order to do that, we capture the appointed mysterious singularity point to the right, its full 4D-coordinate being:

* $a_{real} = 0$
* $a_{imag} = 0$
* $b_{real} = -0.268977354577122029$
* $b_{imag} = 1.26599120536854685$

Since the Cubic Mandelbrot set is a special slice of the four-dimensional (a, b) -space where "a" in the iteration-formula $z \rightarrow z^3 - 3a^2z + b$ is fixed to zero and the b-plane is plotted, we now instead fix the b-parts of the coordinate and plot the a-plane. We start with the whole parent fractal, both M+ and M-, and perform a zoom-sequence (a-view1-6) towards the center ($a_{real} = 0$ and $a_{imag} = 0$) in order to see if this mysterious singularity may reveal its secret from this point of view. In figure 3, a-view3 the environment starts to posses some similarities with the environment around the singularity in the b-plane. The M+ and M- also nearly coalesce and you can see more or less
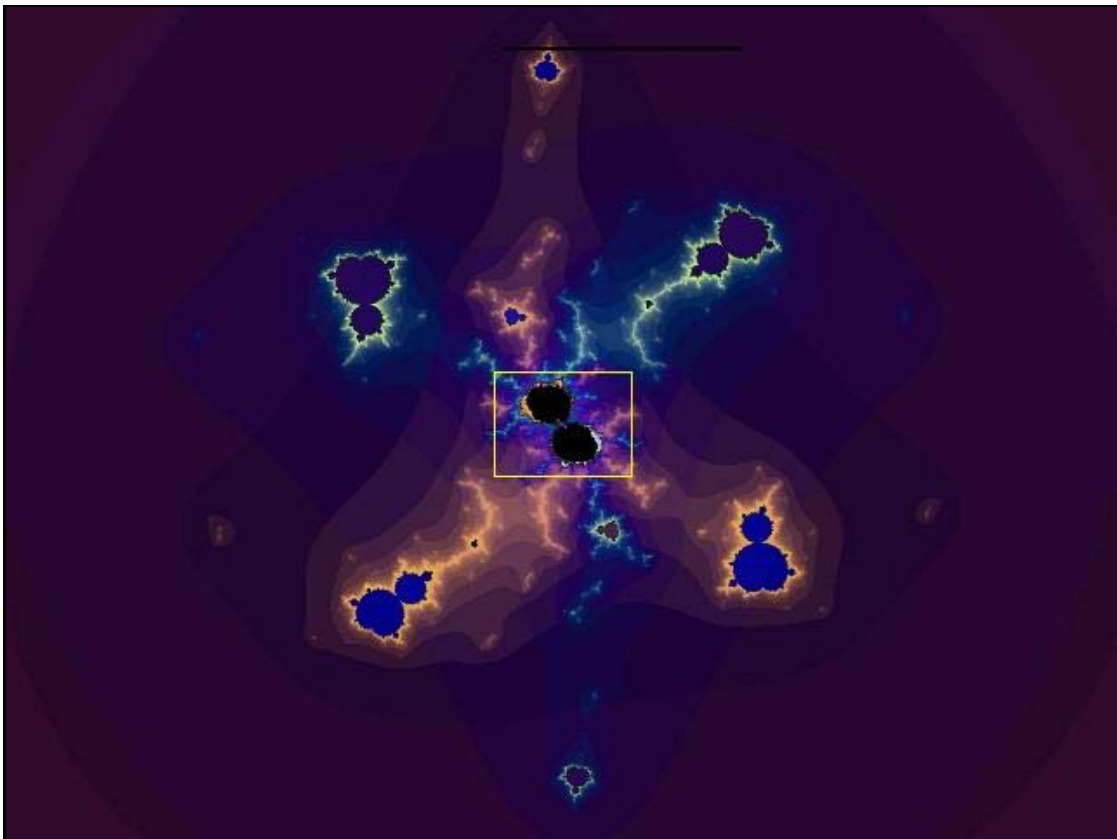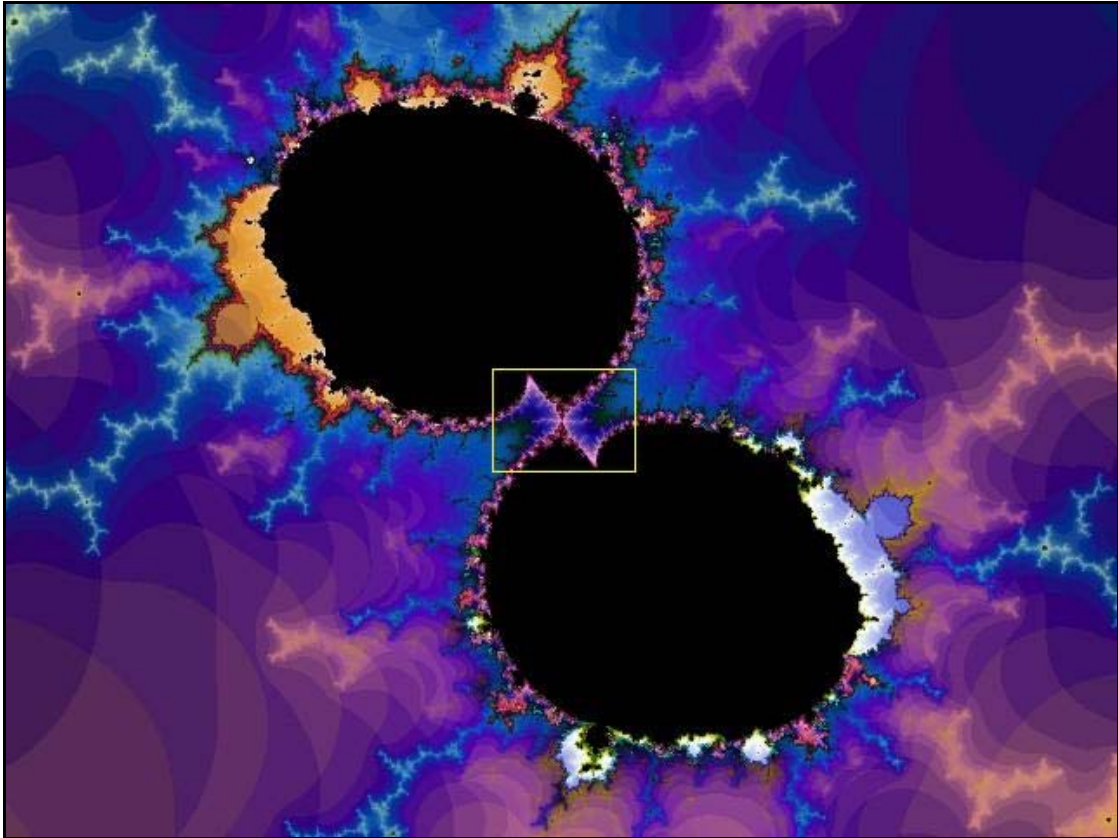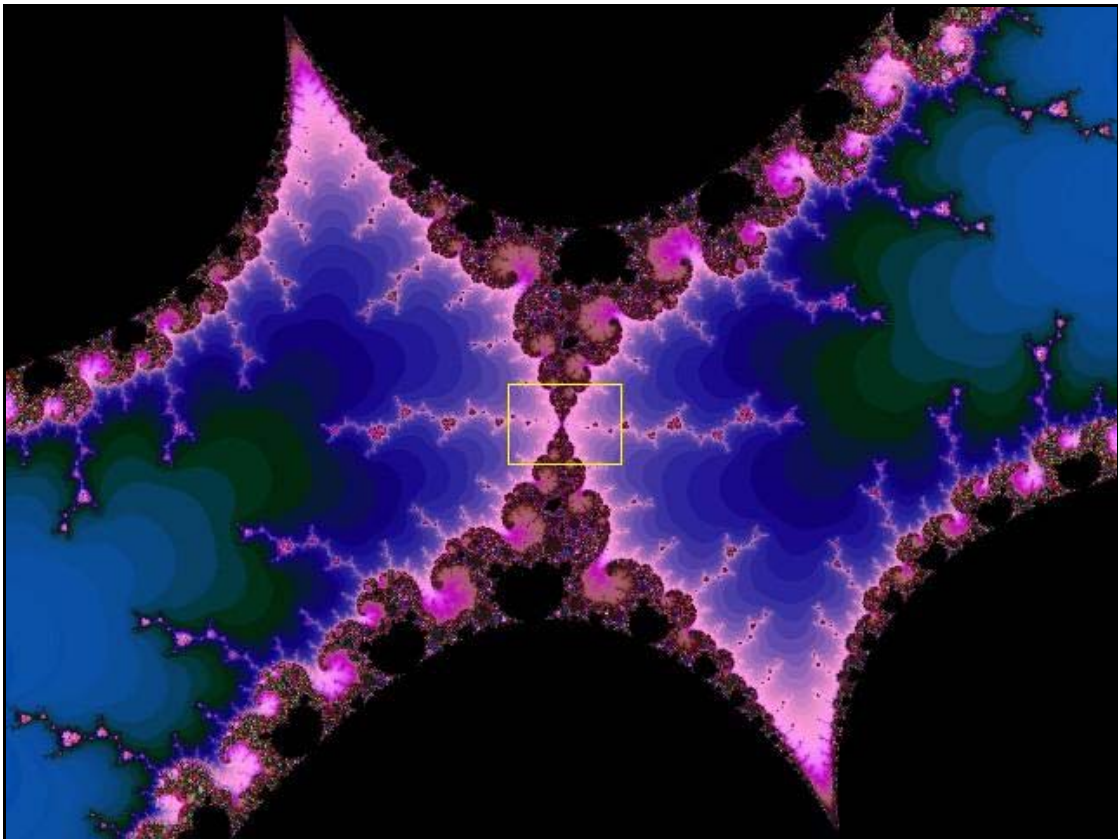

Fig 1. a-view 1.

Fig 2. a-view 2.
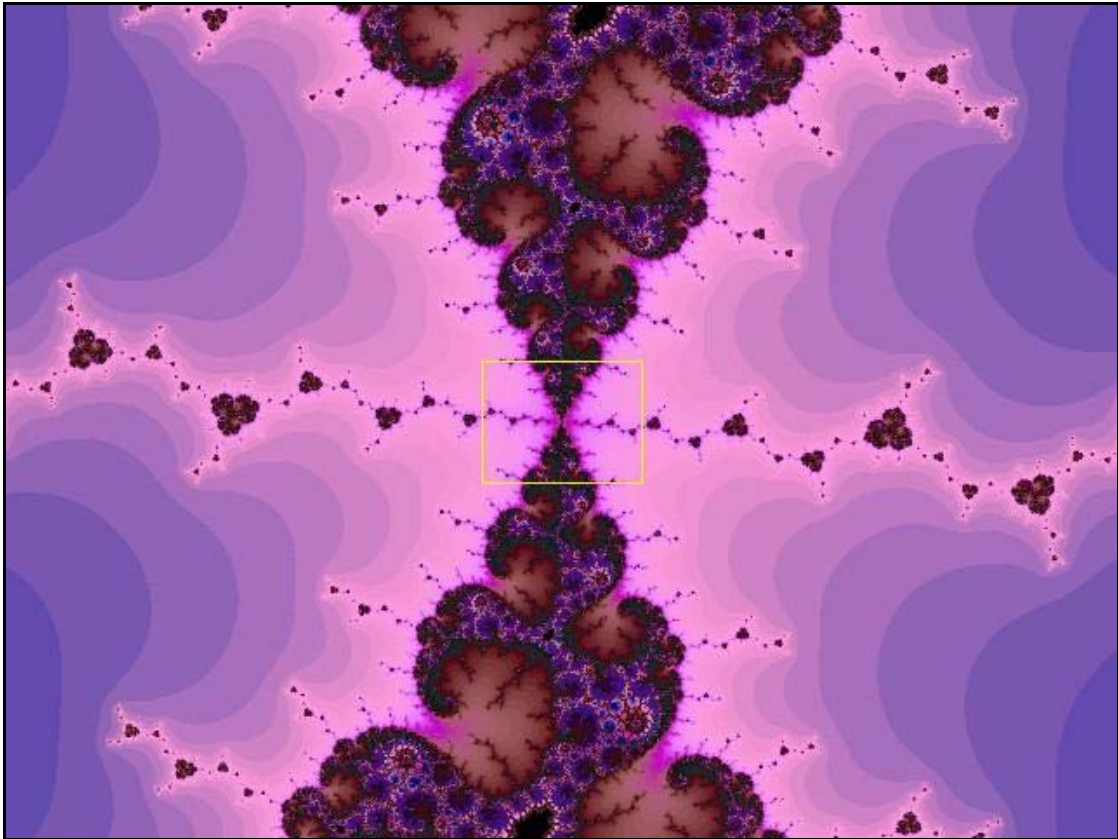

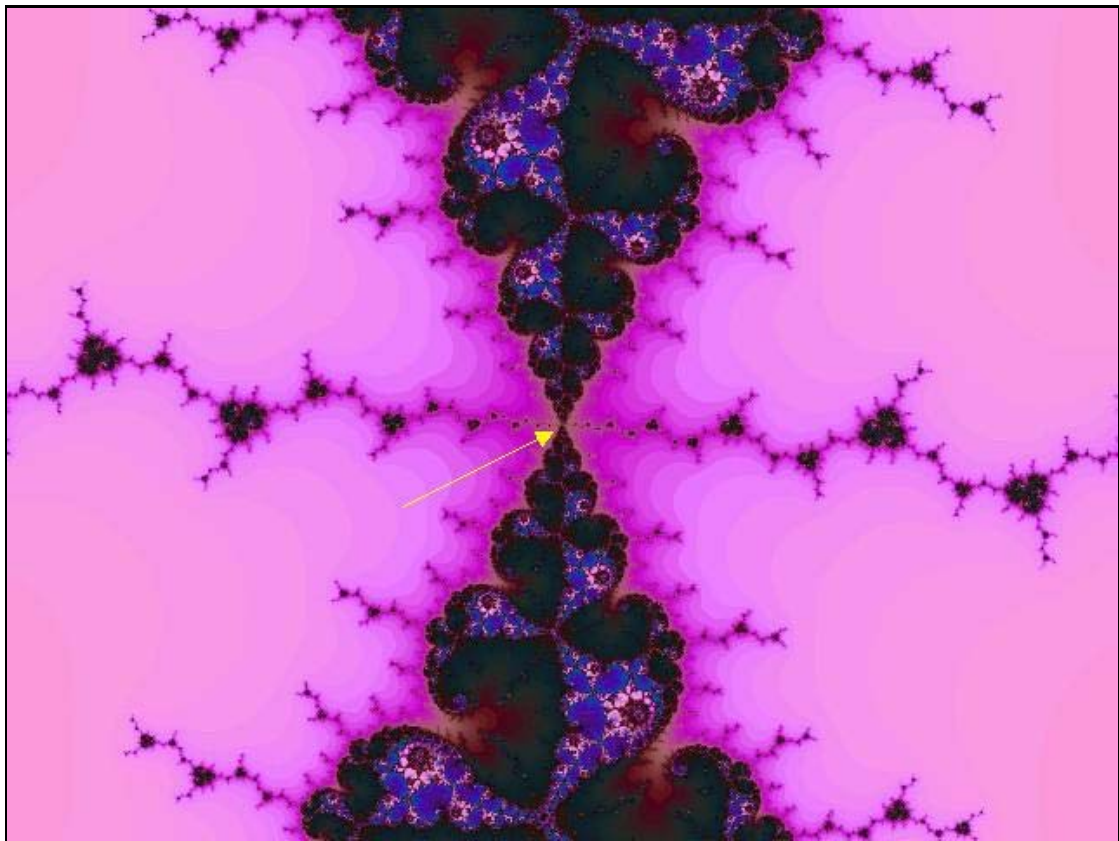**Fig 3. a-view 3.**

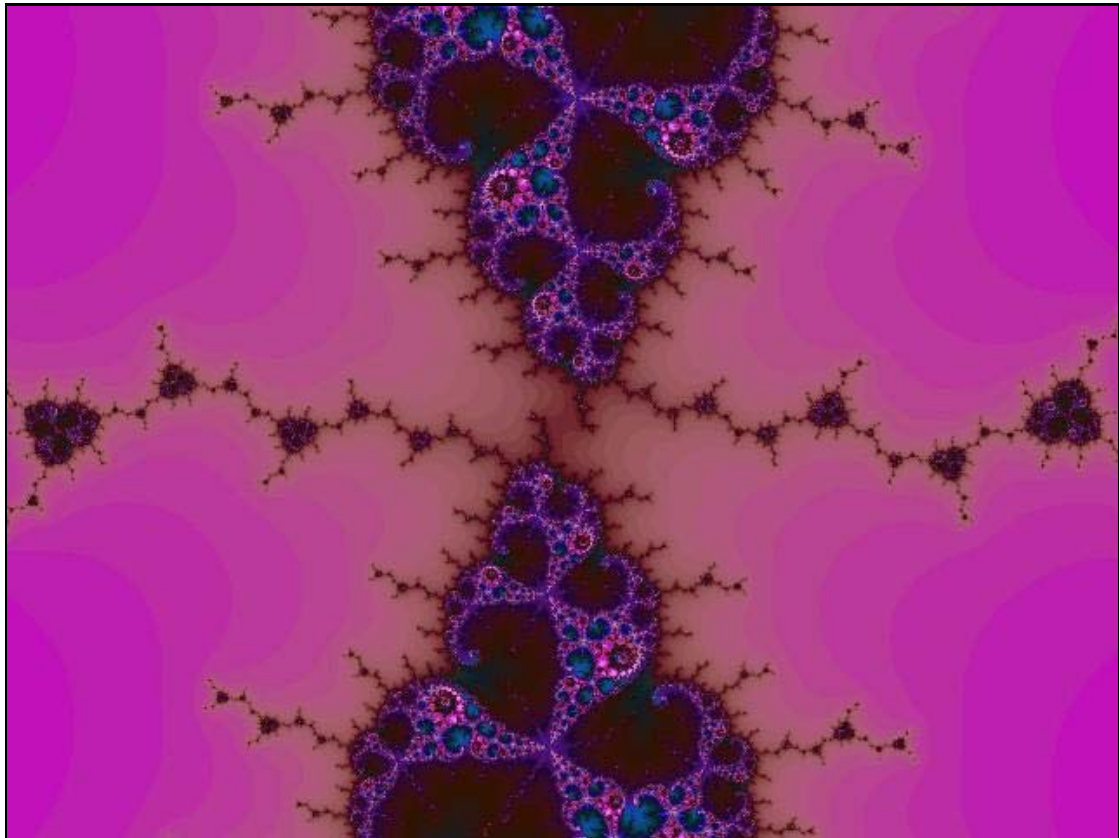**Fig 4. a-view 4.**

Fig 5. a-view 5.

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Fig 6. a-view 6.

defect copies of the cubic Mandelbrot set in the bridges. However the singularity seems to still be there. Two smaller filaments emanate all the time to the right and left from an infinite small bridge where two systems of elephant-structures meet. Oh yeah, if you zoom deep enough the junction point breaks up (figure 6, a-view6). However that would not happens if we had fixed the coordinate in the b-plane with an infinite precision.

Now there are four other perpendicular planes containing this mysterious singularity, (a_{real}, b_{real}), (a_{real}, b_{imag}). (a_{imag}, b_{real}), and (a_{imag}, b_{imag}). Le's use the technique described in Article 22 and from "a-view 6" rotate to (a_{imag}, b_{imag}). Now we obtain figure 7 "View from a_{im}, b_{im}", built up of extremely stretched structures. So will also the views from the reminding three planes look as. However their unmagnified parent-fractals will be quite different. We can easily show that the mysterious singularity is in the center of these images by simply rotate back to the PlottedPlane b-real, b-imag, in which case we will come up with the image "OriginalView". ***In other words the "Great Cubic Mandelbrot Mystery" remains to be a mystery.***

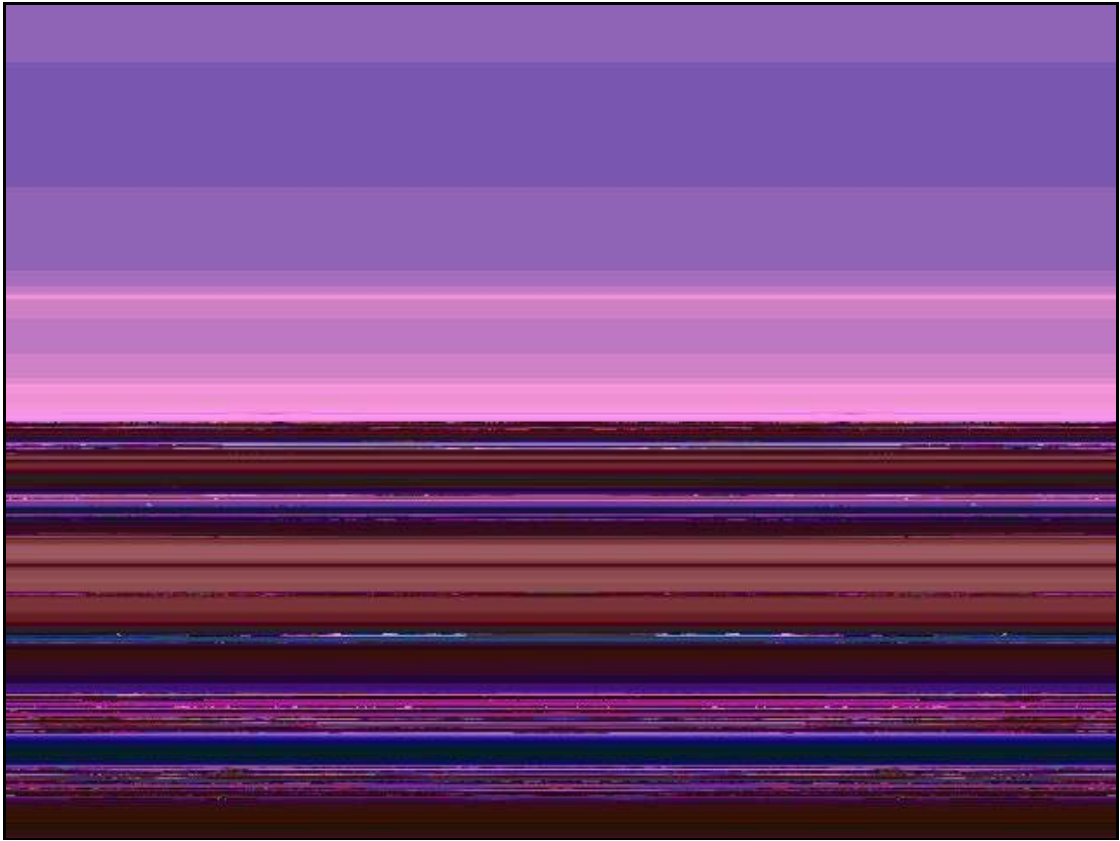Don't forget my "Cubic Tutorial" and "Pictures from Cubic Parameterspace" reachable from my index page.

Regards

Ingvar

Fig 7. View from a_{im}, b_{im}.

The mystical singularity seen from the original view (the b-plane)

Fig 8. Original view.