

## Rum Diaries Blog

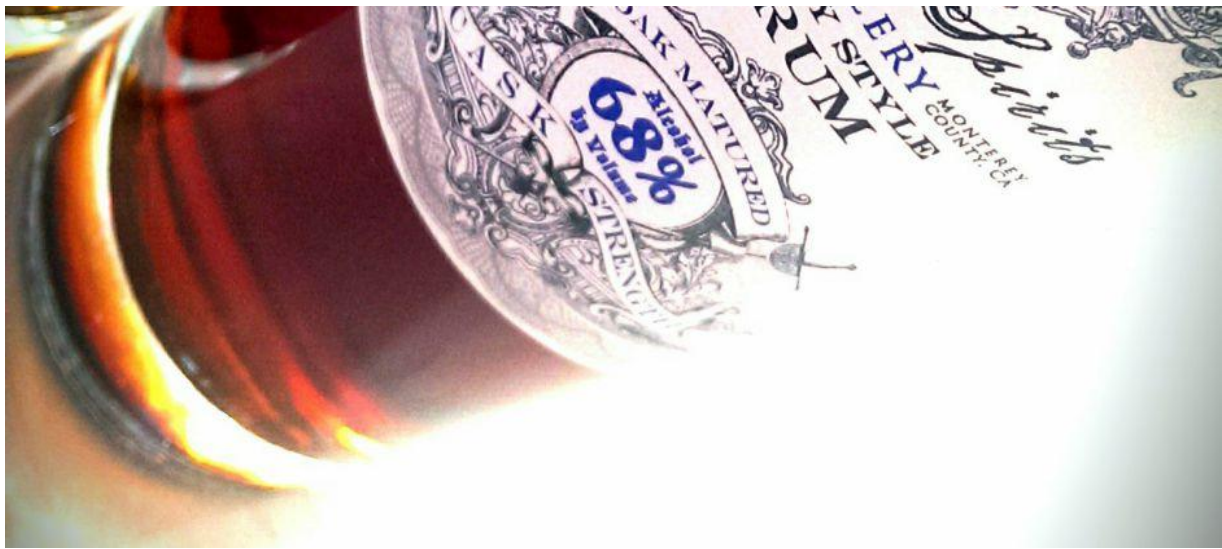
THE RAMBLINGS OF A RUM DRINKER

### Tag Archives: Bryan Davis

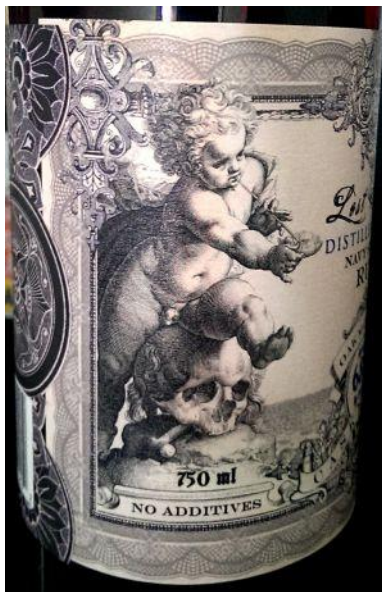
#### Lost Spirits Distillery – The Science Behind the Art

20 JUL





([https://rumdiariesblog.files.wordpress.com/2014/07/imag0777\\_2\\_1.jpg](https://rumdiariesblog.files.wordpress.com/2014/07/imag0777_2_1.jpg)) I had first read about the Lost Spirits Distillery, more specifically their Navy Style Rum on the blog posts over at Inu A Kena and A Mountain of Crushed Ice. Both of those articles left me wanting to find out more anyway but when I clicked on the **Rum Super Geekdom** (<http://spiritsjournal.klwines.com/klwinescom-spirits-blog/2014/2/5/rum-super-geekdom.html>) link (and you can too) and read about Bryan Davis explaining how he approached the production of the rum, high density long-chained esters, Benzaldehyde, dunder and the like, it just *had* to find out more.



([https://rumdiariesblog.files.wordpress.com/2014/07/imag0869\\_1.jpg](https://rumdiariesblog.files.wordpress.com/2014/07/imag0869_1.jpg)) I immediately located the Lost Spirits website and dropped an email query in to get hold of more information.....now it's sometimes rather strange how things seem to pan out, although it shouldn't come as any surprise given the warm and outgoing nature of the rum community (*on the whole, as there are exceptions*). A couple of days later I received a rather wonderful email response from Joanne Haruta, one of the co-owners of Lost Spirits Distillery, essentially asking if I'd like to have a conversation with Bryan Davis, also a co-owner, and Master Distiller of Lost Spirits Distillery....the very man mentioned on the Inu A Kena, A Mountain of Crushed Ice and K&L Wines articles.

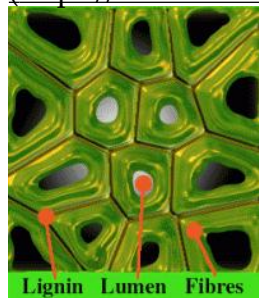
Clearly I immediately jumped at the opportunity, who wouldn't? We synchronized our West Coast U.S.A and North West U.K watches and on the 22nd April, I received a telephone call from Monterey County, California.

During the telephone call which lasted just shy of 60 minutes, Bryan explained that he had written a presentation that he would be giving at the Miami Rum Renaissance mere days later and that what I was getting was a run through. I can only imagine how fortunate those attendees of the Miami Rum Renaissance were as Bryan is a very engaging and clearly intelligent chap with a real passion for what he does. It really was unlike any conversation that I'd ever had, mainly because the majority of it existed at a level of understanding way above the limitations of my feeble brain. Nevertheless, I shall try to sum up my copious pages of scribbled notes into something resembling a few cohesive paragraphs. Although bearing in mind that Albert Einstein famously said, 'If you can't explain it simply, you don't understand it well enough', don't expect too much from me.....I will say in advance that this is a long post, but there was no way that I'd be letting the opportunity to recount our conversation pass me by. Believe it or not, I do actually tell you how the rums taste so if that's all you wish to read, it's somewhere near the bottom.....but I think you'll be missing out.

Bryan explains that the basics of rum production are as follows: choosing your molasses, fermenting,

distilling and aging. What is amazing is Bryan's understanding of the chemical reactions that occur at each of these stages, and it is the understanding of these reactions that enables Bryan to add, remove or even tweak the compounds that are essentially flavour.

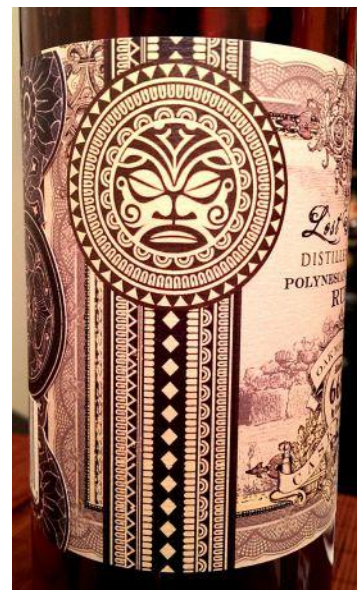
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(<https://rumdiariesblog.files.wordpress.com/2014/07/lignin-cross-section.gif>)

The first step in the process involves selecting raw materials. Here Bryan has two goals. Firstly, he wants molasses with high concentrations of phenolic acids (smoked toasted flavours). Secondly, he is seeking a molasses supply that is free of sulphur and chemical additives. Bryan explains that rum is often made from low grade sulphated

molasses. Sulphur is used to assist with the extraction of sugar from molasses. He explains that distillers can remove the sulphur and additives from the rum, but to do so, they have to remove all of the flavour compounds with similar boiling points. To make sure that he retains all of his flavour compounds in the final rum, Bryan uses grade A (baking grade / first boil) molasses. At this point Bryan goes onto explain about Lignins. Lignins exist within sugarcane and these are the polymers that bind the cells and give the sugarcane its woody structure. As the sugarcane is pressed, a quantity of the lignins are retained within the juice and as they are nature's aromatic polymers, it makes sense to retain as high a concentration as possible. Bryan goes on to explain that as the sugarcane juice is boiled, the lignins begin to undergo a heat induced decomposition into something much more simple called phenolic acids, as mentioned above.



Moving on, Bryan starts to explain dunder to me. Dunder it appears is quite a mythical and secretive substance, traditionally used in the production of high ester Jamaican rums. It is essentially bacterially fermented waste products and / or rotting fruit. Dunder pits are huge wood lined holes in the ground, hidden from view, well out of sight of the visiting public. The pits contain everything from the boiled yeast and distilled molasses leftovers from the previous run to rotting bananas and jackfruit and even dead bats. While this may sound pretty horrific and very unappealing, Bryan goes on to explain that the rotting smells of the pit are actually chemicals called carboxylic acids. These acids will become the building blocks used to create esters (the flavour chemicals responsible for the aromas of fruits and flowers in nature). Because, as Bryan puts it, the Health and Safety guy wouldn't really be agreeable with having a huge festering pit set within his California farmland, he uses a 5 gallon bucket of bananas and lab grown bacteria to mimic this traditional process. Making dunder in this way also gives Bryan control over the process, allowing him to cherry pick bacteria based on their ability to create his desired acid profile. Since these acids will ultimately become delicious esters, this choreographed bacterial dance will ultimately enable him to obtain the specific esters that he desires in his finished product.

([https://rumdiariesblog.files.wordpress.com/2014/07/imag0871\\_1.jpg](https://rumdiariesblog.files.wordpress.com/2014/07/imag0871_1.jpg)) The fermentation process is next on Bryan's list. Essentially he has a pool of bacterially fermented bananas, a quantity of yeast and his grade A molasses. As these components are introduced to each other, the fermentation process begins. During this phase, alcohol is created by the yeast consuming sugars. But as Bryan explains, yeast also create carboxylic acids just like the bacteria in the dunder pit. Since each strain produces a different profile of acids, he chooses his yeast based on the final flavour goals, just like he does with the bacteria. As the fermentation gets underway, the yeast also begin making esters (the flavour compounds that Bryan is after). They do this by chemically bonding acids to alcohols. Each combination creates a new and unique flavour. Butyric acid, which smells like vomit, chemically bonds to alcohol to form pineapple aromas. Valeric acid, which smells like body odour, bonds with alcohol to form jasmine aromas, and so on and so forth. Strangely for some reason, the yeast only form esters when they are under stress. To trigger the yeast into ester formation mode, Bryan creates stress through 'partial nitrogen deprivation'. This weakens the cell walls and creates just enough stress to trigger the desired biological response, without making the



yeast ill.

([https://rumdiariesblog.files.wordpress.com/2014/07/imag0897\\_1.jpg](https://rumdiariesblog.files.wordpress.com/2014/07/imag0897_1.jpg)) Once the fermentation is complete, its time for distillation. The distillation process relies upon the fact that the differing liquid components boil at differing temperatures. Heating the liquid mixture (methanol, ethanol, water etc) and capturing the vapours at the correct intervals allows you to have a greater concentration of the desired constituent components and a lesser concentration of the undesirable components such as methanol. The whole ethos of Bryan's

process is to aid production of the most desirable component for each stage which will reduce the level of undesirables that need removing yet retain a higher quantity of desirables. Lost Spirits use pot distillation with a slow rectification process similar to the process used when creating Jamaican rum.

Now we arrive at the aging process.....which in this particular journey is the final process. It is also the process where the so far shared journey of both the Navy Style and Polynesian Influenced rums forks, and allows them to tread their own paths. The idea behind the Navy Style is to accentuate the pipe tobacco, smoke, nutty and honey flavours whereas the idea behind the Polynesian Influenced is to bring the fruity, pineapple components to the fore, and it is within the barrel aging process that this direction change occurs. Both rums use new American Oak barrels, but Bryan manipulates the charring levels and methods to create two very different rums. The treatments now change.....



([https://rumdiariesblog.files.wordpress.com/2014/07/imag0873\\_1.jpg](https://rumdiariesblog.files.wordpress.com/2014/07/imag0873_1.jpg)) For the Navy Style Rum the barrels are seasoned with Oloroso Sherry and are heavily charred and smoked to produce lots of phenolics. The end goal is to get the fruity short chain esters to bond with the phenolics to create more honeyed, nutty long chain esters, as well as the smoky aromas.

([https://rumdiariesblog.files.wordpress.com/2014/07/imag0898\\_1.jpg](https://rumdiariesblog.files.wordpress.com/2014/07/imag0898_1.jpg)) For the Polynesian Influenced Rum the barrels are seasoned with late harvest Riesling and pineapple was the goal. It's inception was almost a raised middle finger to the very idea of things like terroir aiding the flavour of a rum by proving that one shared process can be changed so drastically by one particular stage within that process. To retain the more

fruity notes gained from the short chained esters, all that was needed was to minimise the aforementioned phenolics, thus stopping the short chained esters bonding with the phenols, and leaving them in their fruity state.

Apologies if that makes absolutely no sense, it's quite hard for me to understand fully, but I really wanted to try to explain how in-depth Bryan's methods are and how this affords him ultimate control over the production of the rum. This is even more amazing when you taste the rums and realise that there is a statement made on each label that lists the basic ingredients as water and molasses. The label also states that no colouring or flavouring additives are



used.



(<https://rumdiariesblog.files.wordpress.com/2014/07/lost-spirits.jpg>) As a quick aside before I tell you how the rums taste, I want to draw your attention to the labels. These too are all Bryan's work. The intricate nature of the label and the time it must have taken to prepare and research the labels just goes to demonstrate how personally he takes the production of the products on the whole. Pirate Ships, Cherubs, a Skull & Crossbones and more otherworldly items adorn the label of the Navy Style whilst Tikis and Sun Gods adorn the Polynesian Influenced.

Now let's see what the rums actually taste like.

### Tasting Notes



([https://rumdiariesblog.files.wordpress.com/2014/07/imag0870\\_1.jpg](https://rumdiariesblog.files.wordpress.com/2014/07/imag0870_1.jpg)) Lost Spirits Distillery Navy Style – 68% ABV

In the glass: Though not as dark as it appears in the bottle, the rum is a very dark mahogany with an almost liquorice black hue. Initially the rum is very astringent due to the high abv but the aromas of smoke and treacle pour out of the glass. You could smell this rum a country mile away. On the nose it is very reminiscent of another favourite of mine, Balcones Brimstone Whiskey. The smoke and treacle are backed up with caramel and an almost citrus sharpness on the nose. The whole experience brings to mind barbecued bonfire toffee and evokes memories of first morning light at a festival with the embers of the fire still smoking away. Swirling the glass releases corkscrew-esque droplets. After the astringency calms down there is a buttery quality to the nose that is like dulce de leche. Real depth is hinted at with vanilla, walnuts and thick treacle appearing as a tilt the glass to my mouth.

In the mouth: Wow. Robust is certainly a word that I'd use to describe my initial sip. The impact of the high abv is apparent as the rum almost takes your breath away but the first sip is packed full of flavour.

That smoke is immediate as is the treacle. It sounds silly to say as the rum sits at 68% abv but it is ridiculously drinkable. Its a little numbing at first but you quickly get used to it. There is flavour that arrives in waves. Smoke, caramel, treacle, oak and vanilla. The treacle is backed up with a nutty, buttery, pastry quality and dark stone fruit like dates and cherries. There is also a hint of liquorice on what is an extremely long finish. Adding a drop of water opens up more sweetness and whilst it makes the rum easier to sip, it removes the ester bomb qualities contained at cask strength. What the water does do is reveal a dandelion and burdock quality which is very welcome. It doesn't have a viscous mouth feel. You really need to try this.

[https://rumdiariesblog.files.wordpress.com/2014/07/imag0896\\_1.jpg](https://rumdiariesblog.files.wordpress.com/2014/07/imag0896_1.jpg) **Lost Spirits Distillery Polynesian Influenced – 66% ABV**

In the glass: This expression is slightly lighter in colour with less of the liquorice and more dark copper. There is also slightly more freedom of movement in the glass and a swirl reveals dumpy but free falling droplets. There is less smoke, although it is there. Instead it is replaced with a little caramel, tropical fruit, ripe apricot, red wine tannins, oak and banana caramel sweets. It is amazing how the same process (to a point) can yield such different results. There is certainly a family feel to the rums as they are not poles apart, but they do have their own identities. As I tilt the glass, the astringent nasal burn leaves me with the smell of fresh pencil shavings.

In the mouth: The mouth feel on this rum is immediately a lot thicker than the Navy Style and is altogether more chewy. Those banana caramel sweets are present along with a hotter mouth feel. Pineapple, apricot, custard, almond, fudge and a citrus oiliness provide the backbone of the flavours. On the way down I get a heavy red wine feel on the back of my throat yet a fruity freshness on the tip of my tongue. I find this harder to sip than the Navy Style due to the mouth feel and its chewy nature. A drop of water thins out the mouth feel and ups the fruit and the rum becomes a lot more like candied pineapple fruit leathers. Once again, amazing stuff.

Mixed drinks are also where the rums excel and you can find ample concoctions over at **A Mountain Of Crushed Ice** (<http://www.amountainofcrushedice.com/?p=18703>) (click on the link then just keep clicking) and **Cocktail Wonk** (<http://www.cocktailwonk.com/2014/06/things-you-didnt-know-about-lost.html>) (also a hot bed of great drinks).

Should you pick these rums up if you are stateside? Absolutely yes. In fact one of my friends picked up another bottle of the Navy Style for me on a recent trip to the West Coast and she managed to nurture it and bring it all the way home. With tax and once converted, it came in at just over £32 and it is worth every penny just for the experience. I firmly believe that both rum and whisk(e)y lovers alike will love these rums. The news also gets even better as rumours are abound of a new expression from the Lost Spirits Distillery, a Cuban Style Rum. Late news in also informs me that the Lost Spirits Distillery range, both Rum and Whisky, has a UK distributor. **The East London Liquor Company** (<http://www.eastlondonliquorcompany.com/east-london-liquor-company.html#lostspirits>) have the rights to UK distribution and that can only be a good thing as you will all get the opportunity to experience Lost Spirits products.

Big thanks must go to both Joanne and Bryan who have assisted me greatly with the production of this article by essentially being my proof readers and technical check ensuring that the 'science' is correct. As is usual with these things, feel free to pop in to try the rums.....we're friendly people.....

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\* Lignin image courtesy of [The International Lignin Institute \(http://www.ili-lignin.com/\)](http://www.ili-lignin.com/)\*

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