

Coopers Scholarship Visit to Scotland. 11th& 12th October 2007

Recipient of Coopers scholarship award: Martin Skelton

Host: Richard Patterson, Master Blender at Whyte & Mackay

During two glorious autumn days in October, I was shown around the Scotch whisky business by Richard Patterson. The visit started with a fascinating exhibition about blending malts at Dalmore House in Glasgow and finished at the picturesque Dalmore Distillery on Speyside. The tour took in visits to the colossal Speyside Cooperage, the Grant family operations of The Glenfiddich and Balvenie. We passed through the Benriach Distillery and fitted in the Whyte & Mackay industrial distillation and maturation facility at Invergordon.

I arrived in Scotland with a little more than my WSET course-based knowledge about this famous drink (yes, the four pages in the 'Exploring the World of Wines & Spirits' book!). I admit to not being a frequent whisky consumer. However, within an hour of arrival, my passionate host was already awakening my curiosity for this beverage. Richard talked of history, families, the moors and its pure water, the heritage and traditions of the highlands and islands and above all, the regional characteristics. We tasted a number of single malts and started to spot the finesse and complexity of Speyside, the phenolic, iodine aromas of Islay and light dry character of Lowland malts. Of particular interest was the effect of cask ageing on the samples tasted and while the charred oak staves of the regular Bourbon barrel do little to change the complexity of the distillate, well seasoned sherry casks certainly do impart distinctive chocolate, nutty flavours and lend their copper tones. I would say that!

With such thoughts we arrived at the Speyside Cooperage where I was taken through a potted history of the coopers industry. The arrival of plastic and aluminium drums in the last century decimated a once powerful guild that used to serve the fishing and brewing industries with vast quantities of wooden containers. Even at the beginning of the Eighties there were still 1,000 coopers performing their artful industry. That decade however saw the industry fall on hard times.

Speyside Cooperage, based at Craigellachie, is one of the last remaining coopers and annually they manually make and repair, mostly by hand, an awesome 100,000 casks, barrels, hogsheads, butts and puncheons. The Taylor family have been running this family owned venture since 1947 and while virtually all their production goes to the whisky business, they still produce some casks for Marstons brewery. The increasing demand for aged whisky stocks (mainly in the

Far East) has massively accelerated production of new casks made from Missouri, Kentucky and Tennessee oak and reconditioned Bourbon barrels.

Our discussions between visits turned to geo-political matters and their impact on this trade. Despite the industry's relative isolation, with distilleries spread across Scotland, it is not spared the affects of topical matters as the economic growth of China and rising costs in agricultural commodities, global warming with milder winters; rationalisation of industrial costs, price competition between multiple grocers and the attractions of luxury demand.

Ironically it is the same new-found wealth of the developing nations that is behind the incremental demand for whisky and even to the extent of a company such as Whyte & Mackay being purchased by an Indian businessman Dr. Vijay Mallya, Chairman of The UB Group for £595m in May 2007.

Our visits to The Glenfiddich and Balvenie Distilleries and the Benriach Distilleries helped cement in my mind the important key elements to the production processes. Balvenie are fortunate to be able to demonstrate the entire process of malt whisky distillation beginning with the cultivation of the barley at Balvenie Mains 1,000 acre farm. The same firm shows visitors the last active and working malt floor in the Scottish Highlands, and from here, after several days of 'steeping' to activate germination, the 'green malt' is taken to the smoke house where the germination is arrested slowly in kilns. Peat can also be used in the kilning process to give its characteristic flavour to the malted barley.

From here on, the rest of the process was virtually identical at all four distilleries visited. A mill is used to grind the malt into a rough wholemeal flour called grist. A vessel called a Mash Tun is loaded with the mixture of grist and water heated to a temperature of 64°C. At this temperature the water activates the enzymes and converts the starch in the grist into fermentable sugars. Hot water is added three times to extract the sugars. The first two waters called Wort are drained off, cooled and passed on to fermentation. The last fill of water is used as the first water of the next mash.

This water is the second key ingredient of whisky. The Dalmore distillery has been using water from Loch Morie for decades. Rain water is too acidic and the use of tap water is unspeakable. The purity and minerality of the water stamps its own unique character on the final product. The same overheating of the planet, that is sending vineyards to higher altitudes and advancing vintages, is also drying up the lochs and springs. The winter snows, that slowly melt well into

the spring, no longer guarantee unlimited supply of pure water and some distilleries will have to look for alternative sources or further a field for their most basic commodity.

Moving back to the process, this Wash is cooled down and has yeast added as it is pumped into the fermentation tanks known as 'wash backs'. Characteristic rotating blades slowly revolve over the fermenting liquid to keep the foam down and after approximately three days the liquid in the wash backs, now called wash, with 7-9%ABV (basically a strong beer!), is pumped to the stillroom for the process of distillation.

The first distillation takes place in 'wash stills', which are filled with the beer-like wash and slowly heated to boiling point. The vapour from the boiling wash rises up the copper neck, and into the condenser, where, cooled by water, it liquefies to become 'low wines', which are held in their own tank, ready for the second distillation. The spirit stills are now filled with these low wines and previous spirit distillates composing lower quality feints and for eshows and once again, the distillation process brings the liquid to the boil which gradually gives off the alcohol vapours. The resulting spirit has a strength of about 70%ABV and is ready for the final process in its long production process; the maturation period in oak casks.

The most powerful image and the most typical photo of the industry is one of the copper stills. Each distillery defends its own shape as being the most appropriate for the process and yet no one seems to offer a definitive explanation of their effect on flavour profile.

Inver Gordon provided a vastly different view of the same process. A massive, Heath Robinson maze of pumps, mills, stills, giant condensers and continuous stills is virtually run automatically and pours out 40 million litres of distillate. It is curious to see a time-old tradition of coopering and charring the Bourbon casks in the midst of such an industrial complex.

During this visit, we discussed the impact of the increased the popularity of bio-fuels and the inflation in cereal prices. The cost of a tonne of wheat that goes into the distillery of Inver Gordon has risen from £80.00 in the spring of 2006 and £160.00 per tonne in October 2007. Barley prices have risen by the same factor.

Supermarkets such as Asda, Tesco retail blended Scotch at £7.50; if we take off duty, VAT, logistics and minimal margins, we don't have enough left to buy a Mars Bar. And yet the whisky has had a double distillation and been left 36

months in a Bourbon oak cask to mellow its character. However the fact that this sort of price can be reached, which supposedly produces a margin, does show how efficient and technologically advanced the industry is.

Of course, what the whisky trade can deservedly celebrate is the business of premium or added value blended and malt whiskies. The marketing behind this industry has succeeded in using its magnificent single and blended malts, to create a halo effect and an aura of glamour and exclusivity. Their massive presence and continuous strong growth in the Asia-Pacific region and other fast developing economies gives Scotch Whisky a secure platform for further investment.

Finally, like most visits, these personal insights where all thanks to really enjoyable tours and my knowledgeable and passionate guides.