Matale Aluhunu

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A well-mined limestone quarry is yet to see the end of the day

Busy factories with burning kilns and operational limestone quarries are a common spectacle in Matale; a name synonymous for decades with the famous '*Matale Aluhunu*'.

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Deep in a recess of more than fifty feet in depth, men and women were pounding at stones with sledge hammers, breaking them into movable pieces.

An open truck made its way through the temporary path deep into the quarry; men prepared to load broken lime stones onto the truck. The weather changed from scorching heat to intermittent rain. Still, the workers did not slacken their pace of work, except to gather more stone or to move away the broken ones. The cavern was parched of any vegetation, just hard stone strewn in plenty. The menacing display of blown up rock surfaces, resembled the harshness of the work done by these men and women. Outside, columns of smoke rose into the sky from several

locations. The area is mountainous and surrounded by the picturesque view of lush greenery and mist-drenched mountains in the distance. This is an area blessed with nature’s bountiful gift of limestone, in fact one of the highest in terms of quality, that, despite the rigorous reality of harvesting, supports the lives of thousands of residents in the district of Matale, in the Central Province.

Lime or ‘*Hunu*’ in Sinhala, is one of the oldest products of Chemistry. The laboriously broken down raw material is transported to nearby factories for conversion. The chemical reaction surrounding the transformation of raw material into usable quicklime was carefully explained to us by Hassan Enoon, a second generation lime kiln and quarry owner who has ‘seen better days’ in Matale’s lime industry. Calcium carbonate, in scientific parlance, is heated at a temperature between 600ºC and 900ºC, which upon reaction with carbon dioxide, forms calcium oxide, which is also known as quicklime. On its own, quicklime is a weak substance, but when slaked with water, it can be used as a medium for plastering and as a bonding material.

Gone are the days when slaked lime was taken to plaster walls in new houses and applied as the base coating. Modern housing and construction has many handy but more expensive substitutes. Yet, the lime industry has survived the vagaries of time and continues to thrive in many villages of Matale, the household economy and source of employment for over three thousand people. This is so, because lime is still applied as a coating in village houses and in agriculture to neutralise acidic soil and to increase the level of important nutrients in the soil. Moreover, lime is utilised in the production of cement, pigment in plastics, paint, tiles and soap.

The industry pioneers in Matale passed down their expertise to the next generation, which despite its archaism has withstood the test of time. This was quite evident as we watched men carrying firewood and the raw material to be placed in the kiln. A lime kiln is set up, by alternatively piling it with the raw material and firewood. Stockpiles of coconut logs were kept ready for use. Men could be seen axing them as more limestone was prepared for the kiln. As the wood burned, the residue together with the burnt lime gradually dropped to the base of the kiln. Shovels with long handles were used to pull the burnt limestones from a crevice at the bottom of the kiln. Men sorted the perfectly burnt stones from those that had not; the underdone stones were separated to be recycled. Apparently, experts contend that the use of coconut trunk and husk to fuel the fire results in unequal levels of heating.

Once a kiln is set in operation,the ‘continuous-process’ of lime production takes place, quite often continuing for up to a year. Although modern furnaces were not in use to heat the lime, signs of drawing on recent technology were evident in the machinery used to crush the burnt limestone. At least two tonnes of processed limestone can be crushed daily using machinery. With excessive dust circulating the surroundings, some men covered their noses to avoid inhalation; some had even covered their heads to prevent specks of dust from depositing in the hair.

Predominantly family-owned, the production of lime and the standards followed varied from one owner to another. With regulations to install chimneys as high as twenty five feet, it was evident that the kiln owners located close to urban centres were conscious of the diffusion of smoke from burning furnaces into residences, while in the interior villages, very run-of-the-mill kilns, with no chimney, but a mere roof made of coconut palm protected the aperture at the top of the kilns. According to the men who were at work, these villages have sparse human populations with dwellings located at a distance, which ensure that the smoke emanating from the heating process is bearable as it rapidly disperses.

As one of the oldest chemical transformations, lime had been used from time immemorial in Sri Lanka. A mixture of lime with clay, sand, sea shells and herbal oils had been applied as a binding-medium for bricks and walls in ancient buildings. The blend made thus, was heated, dried and moistened again, before use. The vertically fixed urinary pits unearthed from the Abhayagiriya Monastery in Anuradhapura are a testament to the effectiveness of lime as a purifier. A mixture of lime, charcoal and sand had been used to drain along the vertical urinary pits, thereby taking away the odour and completely purifying the substance by the time it reached the bottom pit. Lime had also been extensively added in the construction of dams, as in Malwathu Oya and Yodhawewa and sluices in ancient tanks in Sri Lanka. Temples, Buddhist monasteries to giant globe-like Dagobas have withstood the test of time owing to a combination of material based on ancient wisdom, of which lime was always a vital ingredient.

A limestone quarry may not be the ideal compliment to nature’s blessing. It may not even create visions of rapture. Yet, as we left the dust-filled factories and the depths of the pit, one thing was abundantly clear. The lime industry in Matale may not be at its zenith, but it will not stop working. At least the pluckiness of the people will keep the fires blazing.