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PHOTO ABOVE: Whether in his office suit or forest overalls, the new President of the Pine Chemicals Association International (PCA) Alejandro Cunningham will be reaching out to all kinds of association members, or potential members, the world over. Something of a globetrotter, he is intent on expanding the membership beyond the traditional larger companies.

**PINE CHEMICALS REVIEW** is editorially directed to producers and processors of pine gum and wood naval stores; producers and processors of pulp chemicals such as black liquor, soap skimmings, tall oil and turpentine; and producers and processors of pine derivative chemicals for the adhesives, coatings, printing ink, paper chemicals, flavor and fragrance, solvent and household products industries.

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*Covering The Pine  
Chemicals Industry Since 1890*

# MAKING THE PCA RELEVANT FOR ALL



*Interview conducted and translated by Fredo Arias-King*



The new President of the Pine Chemicals Association International (PCA), Alejandro Cunningham, has set himself a demanding task—creating an association model that relates to the diverse constellation of structures found in the pine chemicals industry worldwide. Whether gum or tall-oil, northern hemisphere or southern hemisphere, natural forest or pine plantation, a large corporate or a rural cooperative, he wants to see an inclusive and practicable approach from the PCA that ensures no member thinks of the organization as simply a conference each September.



**How does it feel to have, since January, become the first PCA president that hails from the gum side of the industry as opposed to the tall-oil side?**

Well, first of all it's a daunting responsibility! [laughs] At the end of the day, these pine terpenes are formed in a very specific part of the tree, and there are several ways of extracting them—one being tapping live pines, and another being as a byproduct of papermaking. But the origin is the same. So I think that the usual dichotomy between gum and tall oil is somewhat passé. Moreover, the downstream chemical customers have understood this for quite a while now, and in fact use gum rosin from any origin, as well as tall oil also from any origin, in addition to hydrocarbon resins. Notice also how the European association HARRPA [Hydrocarbon and Rosin Resins Producers Association] includes both rosin and hydrocarbon resins. So to reiterate, that dispute between gum and tall oil is in the past and should be left there. My appointment as PCA President answers to this very same thing—the understanding that both sets of materials come from the same trees regardless of how they are extracted. And to repeat, the downstream users learned long ago to handle, say, gum rosins from various origins and tall-oil rosins also from different origins, and even blend these with hydrocarbons. Same for turpentine.

**But you have to admit there are not-so-subtle differences between the manufacturers of these products, even cultural ones. At the PCA gatherings they even congregate into separate clusters.**

If we talk about large differences in our industry, I would even go beyond the usual dichotomy of gum and tall oil. I would also include an oftentimes overlooked schism within gum: the tapping of natural forests in the northern hemisphere versus the tapping of pine plantations in the southern hemisphere. These represent two very different business models and corporate structures.

Moreover, there is also an Asian versus South American dichotomy, to put it this way. In Asia, the players do not focus so much on where their raw material comes from, whereas in South America this is very important.

**What can the association do to, as they say, grow the commons or lift the tide for all ships?**

Without question, on the issue of sustainability we have to put a great deal of emphasis on demonstrating that pine resin is a sustainable industry, whether it comes from the paper mills or from tapping living pines. We need to convince people that this industry will always be there at a reasonable price and that all the legal norms are being met, plus many jobs are being provided since the gum side of the industry is very labor intensive. That product price should include a reasonable margin for the

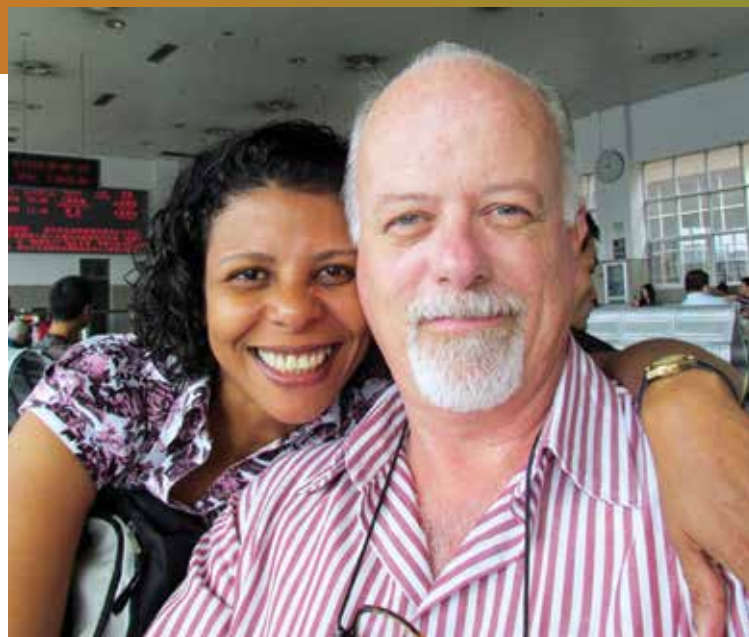
operation, but also enough to replant the forests or plantations from where the materials are derived. On the gum side, in some parts of the world this is being contemplated but not in others. In South America, for example, the price for the materials includes compensation for the workers and for the industry, but also for replanting and replenishing the pines.

More specifically, the PCA can continue organizing the Pine Oleoresin Symposium, which this coming April will be in Savannah [in the U.S. state of Georgia], in order to provide a forum for discussing best practices—such as pine genetics, yields, potential automation techniques to make that labor-intensive collecting more productive, and others. So the PCA can provide that platform and interact with other associations, research centers and universities, so as to demonstrate to the chemical clients that they can continue relying on us. We know from experience that these products have had a tendency to appear and disappear throughout history—availability and prices have fluctuated to the point where pine chemicals are no longer used in certain applications. Recently I compiled a historical graph which focuses precisely on this volatility (see chart on page 13).

**What are your goals as PCA President?**

We need to expand the membership base beyond the traditional orientation towards the larger companies, and towards smaller players such as, say, a rural crude-gum cooperative that produces a few tons per year and can-

**ALEJANDRO (“ALEX”) CUNNINGHAM** became President of the Pine Chemicals Association International (PCA) in January. As a native of Argentina and resident of Brazil, he is the first non-U.S. national to hold this position, and also the first from the gum side of the industry to do so. He has a long trajectory in pine chemicals, beginning in Argentina in the late 1970s before moving to Brazil in the mid-1990s to work for a local company as export manager, eventually becoming the leader of Brazil's resin industry associations, including the annual conference Encontro de Pine Chemicals. From 2012 to 2016, Alex spearheaded the development of tapping and oleoresin production in Fiji. He has also served for most of this decade on the PCA Board and as chairman of the PCA Gum Rosin Committee. His website [www.pinetappingworld.com](http://www.pinetappingworld.com) (before, [www.aredorado.com.ar](http://www.aredorado.com.ar)) provides a wealth of statistics for the industry. An avid amateur astronomer, Alex lives in Itapetininga, São Paulo state, with his wife Adriana.



not afford to pay a full membership fee to the PCA. So we need to find other channels to involve players like those, such as a directory of suppliers so they will feel engaged with the broader world through our association for an affordable fee, or so that the big players know about them and where they are, what they do. We want players like that to feel relevant in the broader scheme of things even if they are not full members that attend the annual PCA events.

Here in Brazil, for example, there are hundreds of resin-industry players, as there are in Mexico or Spain or Portugal. They belong to our world but they are not engaged with the PCA. When one comes face-to-face with these players, who after all are the basis that makes everything else possible, they inevitably tell you their life stories, and those of their parents and grandparents who were also tappers. One common misconception is that the world no longer needs them, no longer needs crude gum. What I tell them is that crude gum and its derivatives are still very much in use, although the production has migrated to China. This myth [that crude gum is no longer needed] is much more prevalent in Spain and Portugal than in Brazil,

of course. In Europe, tapping largely was abandoned not because of a lack of demand from chemical industries, but because of tectonic shifts in costs, exchange rates, other economic opportunities, social mobility, etcetera.

I spoke before about the dichotomy within the gum side of the industry: tapping natural forests in the north versus plantations in the south. One challenge for the PCA is to be relevant for all these players, for the natural diversity of structures within our industry. So this heterogeneity presents a formidable problem but also an opportunity for the PCA—we need to find a model whereby the PCA is relevant to this very diverse constellation. We begin by finding the common denominators that affect all players regardless of how they extract their material, where they are located in the world, what part of the value chain they hail from, or their size.

#### **What have you learned from your experiences in your main theaters of operation, such as Argentina, Brazil, and Fiji?**

I have seen firsthand the incredible diversity of this industry throughout the world—the enormous variability from one place to another. Also, how obvious it becomes that the industry has a future in some places but in others its days are numbered. Part of my job as PCA President will

be to cooperate with other associations, both U.S.-based and international. This will be a task for the first half of 2018, getting together with the representatives of those other associations and discovering synergies between us and them. One strength of the PCA is organizing events. Its annual international conferences are well known. But we also need to explore other income streams, such as publications, or a more interactive web presence. We need to get beyond the current idea that the PCA is just a conference every September, and move on to a place where the members interact with the PCA more regularly.

Brazil has of course become an established player since its humble beginnings in the 1970s; it has grown impressively and to some extent it is helping to replace the falling production in China. Argentina is similar to Spain and Portugal in that they witnessed competition from China and a resulting shrinkage of their markets. Then there is the Fiji experience, a precarious frontier market that we helped develop, essentially from scratch, in search of new sources of supply.

This cyclicity is nothing new in our industry, historically speaking. It was Europe-centered before migrating to the United States, and later





**GUM ROSIN PRICE VOLATILITY INDEX**  
12 Month Running Average of Price Standard Deviation



back again to Europe, before jumping to China. This time is different in that one single player will not replace China, but instead there will be a sort of multi-polarity of countries.

**However, it would seem to me that Brazil more than any other country or even groups of countries will eventually replace China—maybe not in the short term but in the next couple of decades. Judging by the number of hectares planted only for tapping, with only about half currently in production. Doesn't Brazil have much room in which to still grow and become the primus inter pares of this multi-polarity you speak of?**

The problem with Brazil is the relative scarcity of labor, and this is a problem not only there, it is also a worldwide phenomenon. That is why there is the urgency to find some level of mechanization. I have an Argentine friend who quips that while other industries talk about going to Mars, we resin folks speak about how to improve the typewriter. We are still at that stage indeed! [laughs]

**You mean all those subsidies from the European Union going to the French and other EU crude-gum producers have not produced major breakthroughs?**

Not really.

**What about the new Spanish player Resinas Naturales, which has developed some new and interesting tools that make life easier in the forest for the tappers? What strikes me is that these folks see our industry from the outside, as they come from unrelated industries and have developed tools that we had not thought of, such as a form of wheelbarrow with a tool that makes it easier to scoop the crude gum from the collection cup. So should we let these innovations spread by themselves or should the PCA play an active role in spreading them?**

The PCA will not invent something like that but by its very nature it is a facilitator, a networking platform where the members can learn from each other. The PCA has actually always excelled at this task. One example is bringing Aida Rodríguez to the PCA international conference in Santiago in 2016, and featuring for our members this newly minted PhD specializing on resin methods. These are the types of things we do very well. At the Oleoresin Symposium in Lisbon, we brought in some big guns such as Alan Hodges and Gary Peter, to feature both their classic and latest research. Alan's research on the borehole method is great, but it has its limits as it works only on the *elliottii* pine but not on the *caribaea* varieties since as you know the crude gum is less fluid.

**Returning to your experiences in that diverse group of countries, what did you learn from each country that you can bring to the PCA leadership?**

Let me put it this way. In order to extract a million tons of crude gum, which will end up producing 700,000 tons of gum rosin, which is more or less the current consumption worldwide, at a yield of more or less 4 tons annually per hectare—a reasonable yield in Brazil—you need 250,000 hectares of pine plantations. These can be found, either in the southeast of the United States, or in Brazil, Argentina, New Zealand, and in several other places. If you consider the vast expanses of pine plantations, those destined for tapping are probably less than one percent. Nothing really in the grand scheme of things. If you add to that mix eucalyptus and other species' plantations, then our resin world becomes even smaller. That is one part of the equation. The other, however, is the fact of how labor-intensive our industry is. In Brazil for example, you need a tapper for every 7,000 to 10,000 pines. We are very efficient here. The great problem for our Chinese colleagues is their lack of tappers. And even though the Brazilian tapper is 10 times more productive than the Chinese tapper, there the problem is also finding tappers. In the United States, the indus-

try essentially ceased to exist because of a lack of workers willing to tap, since their opportunity cost in other activities was too high for the industry to survive.

**In the United States I can perfectly understand why tapping pines was abandoned a few decades ago. But I fail to understand why, with such high productivity, Brazil still has problems finding workers willing to tap. What opportunity cost do they have? What other activities in those rural areas remunerate them as much or more than tapping pines?**

This is not like Mexico where people actually live in the rural areas. In Brazil, workers live in the cities and are transported to do the tapping. So the opportunity cost is not in the rural areas but in the cities. You hire and train the worker to do tapping, and before you know it, he talks to his brother-in-law who tells him about his job in construction and your worker disappears into that bricklaying grey jungle.

**But with the current economic crisis in Brazil, is that still the case?**

That economic crisis has mitigated somewhat the lack of hands for the tapping fields, but Brazil will eventually exit this crisis and structurally nothing will have changed for our industry.

Obviously, a bigger factor would be the crude-gum prices, which of course depend on the world prices for rosin and turpentine.

When times are good, the big resin industry players in Brazil such as José Jorge Ferreira invest in new plant and equipment, and buy new land and other players. That is Brazil's strength. They invest in productivity, partly explaining the jump to the current 180,000 tons annually in Brazil.

**That's one ton for every thousand Brazilians! Could that be a coincidence? ... So what is the current installed capacity in Brazil, taking into account the planted hectares that are still not fully grown for tapping but will be soon?**

Probably around 250,000 annual tons, but again, assuming there is

enough labor. I cannot emphasize that enough. You see this construction boom everywhere which has been temporarily suspended because of the crisis. But once it restarts, that will absorb workers from all over São Paulo state that prefer to be in the city than in rural areas.

Another factor of influence is the median age of the tappers. If you go to Spain or Portugal, you notice that the tappers are relatively old on average. Here in Brazil you still find young tappers, including many young entrepreneurs. These are the ones we need to engage with the PCA.

**You mentioned that the PCA needs to increase its membership. But does that create a conflict with other priorities? For example, there have been cases where PCA members have not behaved ethically or responsibly in how they conduct business with other members or with tappers, and yet there is a reluctance on the part of the PCA leadership to even address this out of fear they will lose members. So with this goal of increasing raw membership numbers, which has always been a main PCA goal, do you think it can lead to a quantity-versus-quality dilemma?**

We have passed very recently a new Code of Conduct. I guess your question is more on how to make it work in practice. At the PCA Board level, these issues of member misconduct are discussed—don't think they are not.

**What will the PCA do going forward to help the tall-oil industry—in recovery, regulatory issues, safety, etcetera?**

The PCA already has a Recovery Short Course, which it organizes bi-yearly—the last one being this past December in Orlando. This serves as a platform to attract the younger colleagues and socialize them with the veterans of this industry. These are technical sessions and enjoy great success, and these young engineers

leave the course with a wealth of practical information that they can immediately deploy in their day-to-day work. So the PCA has to serve as the platform that ensures that all that knowledge is not lost.

In parallel, through Amanda Young, the PCA's executive director, we are recording the proceedings of the Recovery Short Course but also the International Conference, so we can later make them available through the website.

**At the recent industry gathering in Brazil, the Encontro de Pine Chemicals, back in November, you mentioned the need to have a certification process for our industry similar to what the Forest Stewardship Council (FSC) does for wood harvesting. Can you elaborate on this drive for certification?**

This is a project of the PCA Gum Rosin Committee, now led by Conrado Neves. It would be interesting to have a certification system so that the downstream users know the origin of the rosin that they are purchasing, and are confident that the landowners are following all the local laws correctly.

**I heard there is a project to bring to the 21st Century the storied so-called "Yellow Book" or even "PCA Bible"—the Zinkel-Russell book. Tell us about that.**

The PCA needs to be at the vanguard of publishing technical and educational materials relevant to our industry. The Yellow Book needs to be updated, but that is a huge undertaking. That is why we are thinking of doing this in parts—not as a whole Yellow Book but different publications each covering a discrete topic of pine chemicals.

**As in a digitized, updatable, sort of virtual "wiki-Yellow Book"?**

Exactly. 