

Coffea stenophylla tastes terrific

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A little less than a year ago I talked to Professor Jeremy Haggar about his search for a forgotten coffee of Sierra Leone. It was a species called *Coffea stenophylla*, named for its narrower than usual leaves, which had an extremely good reputation a hundred years ago. Unfortunately it was not very productive and so, despite its excellent flavour, it was shoved out by much more productive robusta coffee. After quite a search, Haggar and his colleagues found a few plants, probably not more than 100 in total. I asked whether he has tasted it; this is what he told me:

Not yet. When we visited, there were no berries. I think it was in January, February this year when our colleagues visited again, they were able to get a small sample, literally a handful of beans. They sent them to us with the hope that we will be able to cup them. They arrived just before we went into lockdown, so we haven't been able to try them yet. Also, it's very difficult to roast such a small quantity of coffee. We think we know someone who has a micro-roaster that hopefully will be able to do that.

The good news is that they found a micro-roaster — Union hand-roasted Coffee in London — and some berries. Time to catch up with Jeremy Haggar.

Jeremy Haggar: The beans came from the population of coffee plants of the *stenophylla* coffee from the forest in Sierra Leone. They were obtained by a collaborator in Sierra Leone. He went back and brought them. Yes, he had found a small population that was fruiting. He went in and collected them when they were ripe, and processed them to send for the sensory evaluation.

Jeremy Cherfas: There was also a population on the island of Réunion?

Jeremy Haggar: Yes, that's right. After our earlier paper about the rediscovery, so to speak, in Sierra Leone, that stimulated researchers

in CIRAD, in the French International Agricultural Research Centre to look more at their collection. They realised that, I guess they knew, that they had a small area or small... I'm not sure quite how many plants, but I know it's probably more than we found in Sierra Leone. It's not a hectare of field or anything, it's a small patch of the stenophylla plants. Therefore they, of course, realised the importance of validating the quality, and they processed a sample from the next harvest that they had to also evaluate the quality.

Jeremy Cherfas: You were worried about not being able to find a micro-roaster. I don't know what kind of quantities were involved. How much did you get from Sierra Leone?

Jeremy Hagggar: Yes, indeed. After it was roasted and ground, it ended up being not much more than 10 grams.

Jeremy Cherfas: That's really not very much, is it?

Jeremy Hagggar: No, indeed. [laughs]

Jeremy Cherfas: Reading the paper, you had five panels with 15 expert tasters ...

Jeremy Hagggar: That was for the CIRAD sample. I'm guessing they had a bigger volume. I think they had about half a kilo if I remember correctly. They were able to then send that out to different experts to cup, whereas the very small sample we had, it was less than 100 grams of fresh green coffee, and then after you've roasted it and et cetera, et cetera, and taken out. ... there's a little bit of selection on the beans to take out the damaged ones, ... you just end up with quite a small quantity. That was done with Union Hand-Roasted Coffee company. They did the roasting and grinding, et cetera. They did a very good job on a very challenging amount.

Jeremy Cherfas: Overall, what did the experts find as far as the stenophylla tasting went?

Jeremy Hagggar: The summary is that it was a equivalent to a high-quality arabica. The cupper at Union Hand-Roasted Coffee, she considered it was very similar to a Rwandan East African flavour prototype profile, and on a score considered it just got into the specialty category scoring level. I think in terms of the types of flavour attributes, some of the ones that came through and perhaps that I

also, fortunately, was able to have one sip of it myself as well, [chuckles] it was quite a delicate flavour.

It was, I would say in my own point of view, notes of a light black tea being more the underlying quality. But then with some quite distinct fruity aromatics associated with that. I think some of the panelists recognised apricot, some blackcurrant, and I think elderflower, which probably would be one that would ring true to me. To me, it had that elder-flowery type attribute to it.

Jeremy Cherfas: Were you present for the whole process?

Jeremy Haggart: I was present for the cupping at Union, yes.

Jeremy Cherfas: Was it exciting? How'd it go?

Jeremy Haggart: [laughs] Yes, it was exciting. It's a bit nerve-racking, obviously with the — Aaron [Davis] had also some other coffees, I think a couple of species and a couple of hybrids. They did not [laughs] excite. This stenophylla sample certainly did. It was something distinct and unique, and everybody agreed they had not really tasted quite the likes of it before.

Jeremy Cherfas: It was interesting because with the CIRAD panel where they had a lot more to be going on, quite a few of the judges thought that the stenophylla was indeed arabica. Are they closely related? The flavour profile seems similar. Are they closely related?

Jeremy Haggart: No, not at all, which is part of the surprise. Yes, the stenophylla is part of the Guinea group of coffee species. They're not closely related to the arabica nor the parent species of arabica either.

Jeremy Cherfas: Because arabica is way over on the east side of Africa, and this is way over on the west side?

Jeremy Haggart: Yes, Ethiopia and a little bit of South Sudan is where it's native.

Jeremy Cherfas: When we talked last year, you were quite hopeful that if it tasted good — and you were very cautious about that — but if it tasted good, that stenophylla could help coffee growers to cope with climate change. What can you say about that now?

Jeremy Haggar: Well, that potential would seem to be there. Just the simple fact that in West Africa, or in Sierra Leone, *stenophylla*, the ones we found were growing at about 400 metres above sea level. That's at a much lower altitude than you would ever find *arabica*, which would be ... 1,000 to 2,000 would be more of its range. It is a species that is adapted to a warmer climate than *arabica*, but does now appear to have the quality attributes not dissimilar from *arabica*.

With climate changes, *arabica* get pushed higher and higher, and there's a limit to the degree that it can move higher up to keep within its climate range. There's likely to be more difficulty, shall we say, in obtaining high-quality *arabicas*. That is a gap that hopefully *stenophylla* can help to fill, I think more in the short term. Hopefully, we can get some small-scale production of the *stenophylla* under way and have it as a niche coffee in its own right. Then in the slightly more medium term, then hopefully also, as the scale of production grows, it can start to complement at least some of that high-quality *arabica* niche.

Jeremy Cherfas: Currently, it's a wild species. How will it be brought into production, do you suppose?

Jeremy Haggar: Well, indeed, that is a good question. There's two routes. I think from the Sierra Leone point of view that the plants are in the wild, our collaborators have started collecting more quantities of seed to establish, which are established in nurseries now. Obviously, there's quite a limited supply of seed because they have probably less than 100 plants. That's one source, but that will gradually build up.

The other source, there are one or two *stenophylla* plants in the international coffee collections. From what we understand, it is literally there's one in Uganda. There used to be one in Costa Rica, it died about three years ago. We understand there are some in Ivory Coast, where *stenophylla* is also native. Obviously, the French do have a small quantity in their collection in Réunion. I imagine that will be the other route in the sense that's not wild, that's a collection in my mind. Well, we understand it was collected from Ivory Coast. That will probably be the other route that it will come into cultivation.

Jeremy Cherfas: In the current paper, there's a brief mention of another species that I haven't heard of, which is not surprising, called *Coffea eugenioides*. Tell me about that one.

Jeremy Haggar: Eugenioides is one of the parents of arabica. Arabica naturally occurred when eugenioides and canephoras, robusta coffee, hybridised naturally in the wild. Then, what happens is that, often, the hybrid itself is not very fertile, but if the chromosomes double up again and they can pair better and then that forms essentially a new species, which is what arabica is. Arabica is the result of a natural cross between eugenioides and canephora. There is the potential to do the same thing between stenophylla and others. And we did ... in the coffee collection in Sierra Leone, we did find a hybrid between stenophylla and liberica.

Jeremy Cherfas: Eugenioides itself is not going to appear as a coffee for drinking?

Jeremy Haggar: It is being, yes. I think in Kenya, people were collecting it from the wild and have now realised it's quite good and so are now selling it separately. It is quite a common species in coffee collections around the world. There are some other commercial producers who have started planting small areas of it because it does have its own niche market. I understand it's a much smaller bean, but yes, it has good flavour.

Jeremy Cherfas: You mentioned that in Sierra Leone, they're collecting seeds and they're multiplying them up. Do you think it's possible that stenophylla will get its revenge on robusta by displacing it just as robusta probably displaced stenophylla back in the day?

Jeremy Haggar: Maybe. I think it'll more be a case of complementing, but we'll have to see how ... we don't know how productive stenophylla is. We understand the reason that it wasn't pursued further in the past was because of lower productivity than robusta. Of course, that was under different market conditions. We're hopeful that the high quality of stenophylla will compensate for a lower productivity, lower than robusta.

Sierra Leone is never going to compete with Vietnam and Brazil in terms of bulk productivity for the commodity market, whether you're talking about stenophylla, or robusta, or also liberica. Again, there's quite a variety of libericas in Sierra Leone. Again, we had one or two cupped, and a couple of those came out interesting. I don't think that's ever going to be a big market, but I think there's potential for developing niche markets across all three of those species. That's probably the better route for a small producer.

Jeremy Cherfas: That's what I was going to say. Who wants to compete with Brazil and Vietnam on the commodity? That seems like madness to me. There could be a future for good quality coffee from Sierra Leone.

Jeremy Haggar: Yes, I think so.

Jeremy Cherfas: You're quite keen on Sierra Leone, as a country that needs development. How do you see that working out?

Jeremy Haggar: As you said, yes, there is a need for it to develop markets and products, because it is still largely a rural agricultural economy. Actually, there's a substantial EU-funded program for agricultural investment in Sierra Leone that is focused on tree crops, and primarily coffee and cocoa. There is some investment and some money there to pursue this. It will require consistent investment probably over 10 years to get that to happen, which is sometimes one of the challenges with development and aid money as it tends to come in smaller packages. Getting that long-term trajectory is what is vital to getting the follow-through.

Jeremy Cherfas: Maybe some of the specialty coffee roasters, traders will actually think it's worth investing themselves.

Jeremy Haggar: Well, let's hope so. I know that there's a number who are interested, obviously, in the *stenophylla* itself.

Jeremy Cherfas: Have they actually been beating your door down since the paper came out?

Jeremy Haggar: Well, we've had one or two contacts from some of the big roasters, actually, since the first paper came out. We do have one trader who's interested in providing some support. We are hopeful that things will be building up. Now, we have this final bit of evidence that this is a coffee that's worth investing in, we're hopeful things will progress.

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