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Birds and coffee, the perfect blend: Exploring the perspective of coffee shops on Bird Friendly certified coffee

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Birds and coffee, the perfect blend:

Exploring the perspectives of coffee shops on Bird Friendly certified coffee

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UBC sustainability



Executive summary

Bird Friendly coffee (BFC) is organic, Fair-Trade, shade-grown coffee that comes from coffee plantations certified by the Smithsonian-developed seal, providing valuable habitat for migratory birds. BFC gives coffee buyers the opportunity to contribute to the protection of habitat through their purchase of sustainable coffee. However, at present there is little demand for BFC coffee from consumers, and an inadequate supply from coffee shops offering it for purchase. To increase the awareness of Bird Friendly coffee at the University of British Columbia (UBC), the Social Ecological Economic Development Studies Sustainability Program (SEEDS), in partnership with Environment and Climate Change Canada (ECCC), has commissioned our group from the RES 510 course to help determine the main barriers to increased consumption of Bird Friendly coffee on UBC's campus. As coffee shops are a bottleneck in the supply chain and determine which coffee is sold to consumers, our group sought to better understand the coffee supply and sourcing decisions made by coffee shops at UBC, as well as the coffee shop's perceptions of their customer base.

We contacted every coffee shop operating at UBC and conducted five semi-structured interviews with coffee shops representing the majority of coffee sold on campus. We analysed the interviews thematically using NVivo and manually selected some of the key quotes and sentiments expressed by the interviewees. From this analysis, we learned that all the coffee shops we interviewed carried a selection of certified coffee, but only one interviewee was familiar with BFC. While interviewees refrained from generalizing about their customers, they acknowledged that a portion of their market was interested in ethical coffee and would potentially purchase Bird Friendly certified blends. The conclusion of this report includes a series of recommendations for SEEDS based on our interview analysis. Most notable among them is the recommendation for SEEDS to establish relationships with coffee shops operating at UBC in order to raise awareness about BFC on the supply side of the market. As part of these partnerships, we recommend that SEEDS jointly develops marketing strategies with coffee shops to raise awareness of BFC among customers, to increase the demand to meet the supply.

Table of Contents

1. Introduction	4
2. Literature Review	5
2.1 <i>Birds under threat</i>	5
2.2 <i>Synergies between birds and coffee agriculture</i>	6
2.3 <i>How certifications work, and how they do not</i>	8
2.4 <i>Consumer behaviours to sustainable coffee certifications</i>	9
2.5 <i>UBC's coffee landscape</i>	10
3. Methods	11
4. Findings and Analysis	13
4.1 <i>Coffee sourcing and supply</i>	13
4.2 <i>Perceptions about customers</i>	15
5. Recommendations	16
5.1 <i>Engage and educate UBC Coffee Shops</i>	16
5.2 <i>Lobby UBC Food Services</i>	16
5.3 <i>Plant seeds across the city</i>	16
5.4 <i>The barista is your best friend</i>	17
5.5 <i>Make the seal salient</i>	17
5.6 <i>Continue customer research</i>	18
6. References	19
Appendix A. Interview questions	22

1. Introduction

The decline in migratory has been noted with concern and has prompted the development of a Bird Friendly coffee certification to combat the loss of crucial bird habitat in coffee-producing countries (Figure 1) such as those found in Latin America (Perfecto *et al.* 2005, Smithsonian's National Zoo, 2020).). However, the supply of this certified coffee currently exceeds the demand, leading to the creation of a research proposal put forward by the Social Ecological Economics Development Studies (SEEDS) Sustainability Program at the University of British Columbia (UBC) in collaboration with Environment and Climate Change Canada (ECCC) to understand the barriers of Canadian consumers and coffee shops to purchasing this certified coffee (González *et al.* n.d.). This report seeks to address a component of this larger proposal by researching the barriers to bringing Bird Friendly coffee (BFC) to coffee shops on UBC's campus.

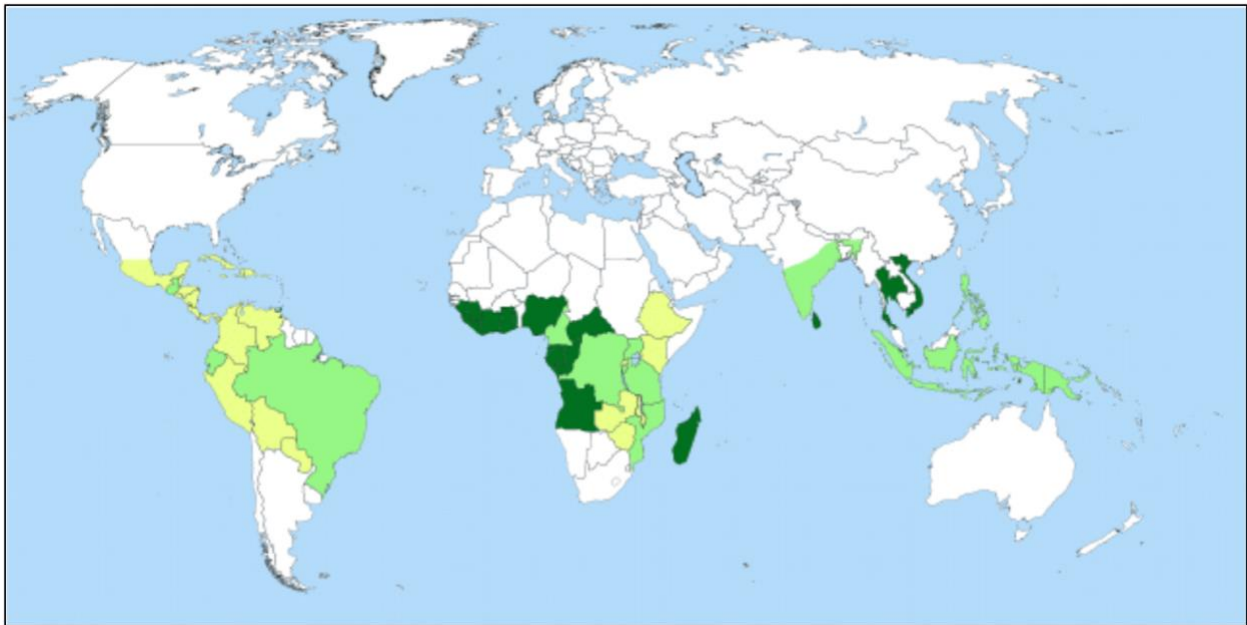


Figure 1. Map of coffee-producing countries with dark green representing where robusta coffee is grown, yellow represents where arabica coffee is grown and light green represents mixed cultivation (Creative Commons).

The research presented in this report focuses upon coffee shops specifically because they have more control over the supply chain of coffee than consumers—it is the shops that select and purchase the coffee to be served. To understand the barriers for shops in serving Bird friendly coffee, we conducted a review of relevant literature to better understand the context of the Bird Friendly certification as well as the coffee supply chain, other sustainable coffee certifications, and consumer interactions with these certifications. Interviews with five individuals in a managerial role at coffee shops on UBC's campus were carried out, and a thematic qualitative analysis of the interviews was completed. The findings generated from this analysis were then used to formulate six recommendations for our partners, SEEDS and ECCC, on how to increase the adoption of BFC coffee across the UBC campus. Several of these recommendations may also have relevance for increasing sales of BFC beyond just the UBC campus and could make a contribution to increasing sales of BFC across Canada.

2. Literature Review

2.1 *Birds under threat*

Birds have always fascinated humans, long before they were drawn on cave walls, and they will continue to long after the last bird field guide is painted. They are some of the most charismatic animals that we enjoy seeing in our backyards and parks, regardless of how common they might be. But they also play critical roles in the environment; birds carry out extremely important ecosystem functions like pollination and seed dispersal, and they hold important places in the food chain as top predators and common prey. Additionally, studies have shown how their very presence contributes to human well-being (Ratcliffe *et al.*, 2013; Şekercioğlu *et al.*, 2004). The loss of bird populations will have unimaginable environmental, economic, and social consequences—and it has already begun.

While British Columbia is the most biodiverse province in Canada and is home to hundreds of species of breeding birds, a history of deforestation, contaminants and invasive species has resulted in the loss of nearly a third of Canada's migratory forest birds over the past 50 years (Figure 2) (Raincoast Conservation Foundation, 2020; Rosenburg *et al.*, 2019; The Nature Trust, 2020). Grassland birds and songbirds, like the ones that frequent UBC's campus, have been hit particularly hard as they are also vulnerable to additional threats including predation from outdoor cats, strikes with buildings and cars, and declines in insect prey populations (Holden, 2020). UBC, which is located along the Pacific flyway, is an important rest stop for many of these migratory birds, but has been looking for ways to minimize its impact on bird mortality and promote its biodiversity (UBC news, 2019). Similarly, Canada and the US have also been looking for ways to reduce negative impacts and facilitate the recovery of species at risk through the creation of a series of laws, but such regulations cannot extend to the other places that birds live during the year. Like birds throughout Canada, many birds residing in British Columbia seek refuge from Canadian winters by migrating to the forests of Latin America. But winter is not the only environmental change that birds have to contend with. In the past century, Latin America has seen enormous deforestation for the sake of agriculture, and it is estimated that less than 10% remains of the mid-elevation montane forests that many of these migratory bird species rely on (Perfecto *et al.*, 2005). At this elevation, much of the original habitat has been converted into coffee plantations.



Figure 2. Decline of continental birds in Canada and U.S. from 1970 to 2020 (Campbell, 2019).

2.2 Synergies between birds and coffee agriculture

Despite the apparent conflict, birds and agriculture are not necessarily at odds with one another. Depending on the management style of coffee production, farmed land may be able to invite and support a variety of birds. Farmers choose from a range of different management strategies: from rustic production, in which coffee bushes make up the understory and are shaded by a healthy canopy of tall trees, to intensive monocultures of coffee bushes that grow in direct sunlight, as is described by Figure 3 (Moguel & Toledo, 1999). Traditional coffee farms are some of the only remaining forested areas in the mid-elevation ranges of Latin America, and therefore one of the last reserves for migratory birds (FPSNSM, 1998). Shade-coffee plantations offer great conservation potential, as there is evidence of many species preferring this modified habitat over other agricultural and land management options (Komar, 2006). Some species of birds have been equally successful in the canopies of coffee plantations as they are in naturally forested areas (Gómez *et al.*, 2015). This is excellent news for declining species like the Golden-winged Warbler, Cerulean Warbler and Olive-sided Flycatcher, which have all been reported in coffee farms, and based on indicators like body mass and density estimates, are believed to be thriving in these plantations (Bakermans *et al.*, 2009; Davidson *et al.*, 2011; IUCN, 2016; NABCI, 2016). In fact, nearly 100 Canadian breeding species have been spotted in shade-grown coffee plantations to date (Komar, 2006; Díaz-Bohorquez *et al.*, 2014). Furthermore, agricultural land management practices which include a diverse overstory provide a range of critical ecosystem services and support greater biodiversity, which in turn contributes to the ecological functioning of the system and gives back to the farm (Rice, 1999). Birds as bio-pest control and insects as natural pollinators compliment coffee production and contribute to increased quality and productivity in coffee farms (Karp *et al.*, 2013; Klein *et al.*, 2003; Ricketts *et al.*, 2004). Shade-grown coffee also benefits and elongates soil fertility, because of the leaf litter dropped by the upper canopy, animal fertilizer, and better cycling of

nutrients, while sun-grown strategies exhaust the soil earlier, in part due to reduced biodiversity (Siebert, 2002).

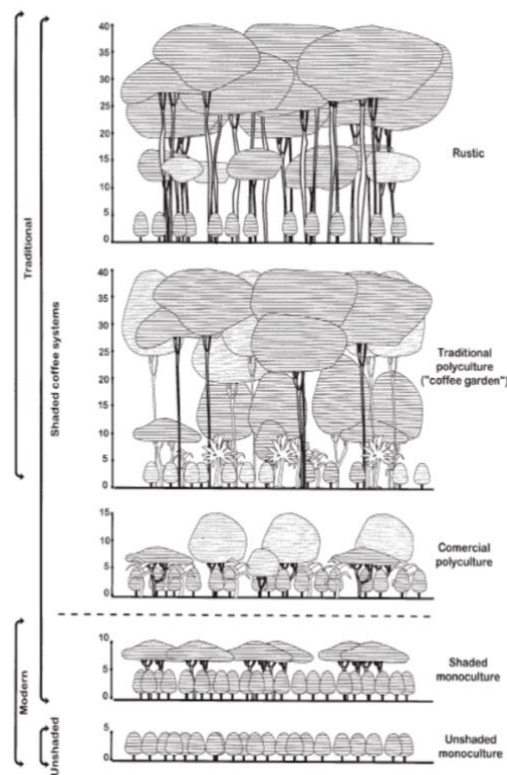


Figure 3. Shade-grown coffee plantations consist of any field that contains an upper storey canopy shading the coffee-bushes below, while sun-grown coffee are monocultures of the bush alone (Moguel, 1999).

While there are many benefits to biodiversity in maintaining the overstory, farmers are often most focused on high productivity, and therefore are more inclined to use intense land management practices. In addition to market pressure, many government incentives in recent years have encouraged increased yield. In an effort to increase their production, many farmers have shifted away from shade-grown strategies to the more intensive land management practice of sun-grown coffee fields which typically offer higher yields (Jha et al. 2014). Composed entirely of coffee bush monoculture, sun-grown plantations eliminate the canopy trees that offer crucial habitat for migratory bird species in Latin America (FPSNSM 1998). As a result of this intensification process and continuing deforestation, Latin America has seen a greater decline in migratory birds than any other overwintering area (González-Prieto, 2018).

There are many laws and policies in place in Canada and the United States (including the Wildlife Act, Species at Risk Act, and the long-standing Migratory Bird Convention Act), that seek to protect birds, but these laws cannot extend outside national borders, leaving Canadians and Americans powerless to protect vulnerable birds outside of their own countries (The Government of Canada, 2020). It is for this reason that the Smithsonian Institution created the Bird Friendly certification in 1997 in an effort to employ market mechanisms to preserve bird-friendly management practices

and habitat conditions in coffee farms (Auld, 2010). Bird Friendly coffee specifically targets migratory birds' needs and requires certified plantations to uphold specific standards such as: minimum canopy height and cover, a variety of tree species, and specific levels of spatial complexity (Smithsonian's National Zoo, 2020). Additionally, the Bird Friendly certification is rigorous in its requirement for 100% certified and organic coffee to be used in its blends, unlike other certifications that allow heavy dilution with uncertified beans (Gonzalez, 2018, "Bird-friendly Coffee FAQs", 2020). The Bird Friendly certification gives North American citizens the opportunity to support and preserve viable habitat a continent away for the birds they love whenever they purchase coffee.

2.3 How certifications work, and how they do not

The Bird Friendly certification does not exist in isolation—there are four other major third-party sustainable coffee certifications, including Rainforest Alliance, UTZ, Organic, and Fair-Trade (Figure 4). Certifications for coffee were initially developed to promote better economic conditions for small holdings coffee growers through the Fair-Trade certification (Elder *et al.*, 2014), but have since expanded to consider other aspects of sustainability, and now different certifications focus on resource and biodiversity conservation in addition to improved livelihoods. Certified coffees are now the fastest growing sector of the coffee market (Perfecto *et al.*, 1996), reaching almost 50% of the coffee value in the United States during 2012 (Jha *et al.*, 2014). The certification process involves a set of requirements for plantations that boost sustainability and ensure the quality of the product, in exchange giving growers a premium to compensate them for the potential reduced yield associated with less intensive management efforts (Perfecto *et al.*, 2005). BFC overlaps with other certifications in that it is organic and Fair-Trade, but it mandates additional regulations around upper story trees (Gonzalez, 2018). BFC has the highest agro-environmental standards among the coffee certifications to protect the precious remaining forested plantations while attempting to encourage the creation of new habitat (Tangley, 1996; Jha *et al.* 2014).



Figure 4. Example of major sustainable coffee certifications (CESA, 2021).

While these certifications have been created to address social and environmental concerns, such as the Rainforest Alliance certification which must adhere to specific sustainable agricultural standards (Rainforest Alliance 2021) or Fair-Trade certification which seeks to create safe working conditions and sustainable livelihoods (Fair-Trade USA 2021), they are not without criticism. Some have noted that system-wide concerns are not being addressed, including, for instance, that Fair-Trade branding has been co-opted by large businesses. In the case of the Fair-Trade certification, many producers report having a better quality of life, but also have significant debts as the Fair-Trade premium has not increased alongside inflation (Auld, 2010). There are also worries that the premiums that are paid to growers are not high enough compensation and that specifically shade-grown coffee (including BFC) should have an especially high premium to recoup lost potential

yields. This increased premium could lead to an increase in coffee prices of US\$0.10 – 0.60 per pound for suppliers, which could raise prices for consumers. In some cases, this premium does not even filter down to the grower and instead remains with the certification agency (Perfecto *et al.*, 2005). BFC does not specifically address standards of living for growers but anticipates that the higher premiums should provide for an enhanced quality of life, but there is doubt that the compensation is sufficient considering the many requirements BFC asks of growers (Gonzalez, 2018).

The international coffee market has continued to change in recent years with the rise of multinational corporations such as McDonald's and Starbucks serving certified coffees (Elder *et al.*, 2014). Elder *et al.* (2014) argue that this is a business strategy to capitalize upon the higher price margins of specialty coffee rather than an explicit focus on sustainability as research has shown that there is greater inequality in the distribution chains of certified coffees with retailers retaining significant profits. A marketing focus on sustainability has helped these large companies to become a dominant force within the coffee sector. To continue to ensure effective environmental practices on certified coffee plantations that are largely impacted by the forces of the international market, it may be necessary to utilize non-traditional policy tools (Perfecto *et al.*, 1996). Many of these companies have started directly sourcing coffee from producing countries, effectively shortening the supply chain and shifting power from roasters and manufacturers. In some cases, there are examples of this shortened supply chain resulting in small growers having to become large-scale production wage labourers, to meet the supply demand of these corporations. There is also indication that sustainable coffee supply chains are more unequal in distribution value than conventional supply chains with corporations benefiting from significantly marked-up profits with little change to profits for growers (Elder *et al.*, 2014).

2.4 Consumer behaviours to sustainable coffee certifications

Some research indicates that customers generally are willing to pay more for products which are branded as environmentally friendly. While the consensus amongst many researchers is that knowledge and values are more important than demographics in this regard, much of the research is contradictory (Laroche *et al.*, 2001). In a study conducted in 2001, Laroche and colleagues found that individuals who were more "collectivist-minded" were more likely to be environmentally conscious consumers. However, the consumer must be aware of the certification in order for it to be a consideration in their purchase. A phone survey conducted in 2008 showed that 48% of Canadians are "somewhat to very familiar" with Fair-Trade labels and 71% were "somewhat to very familiar" with organic labels (Auld, 2010). A survey in the United States indicated that birdwatchers would pay up to two dollars more per pound of coffee to support bird conservation, but even among this highly relevant demographic only 20% were actually familiar with BFC and less than 10% actually purchased the BFC coffee (Hernandez-Auilera *et al.*, 2019). Evidently, one of the greatest barriers for BFC at present is its potential customers' awareness of its existence and values.

A study by Takahashi *et al.* (2018) focused on three of six barriers that have been identified to purchasing sustainable foods, specifically for shade-grown coffee: lack of awareness, lack of motivation and failure to notice labels. Using a randomized controlled trial and eye-trackers, they determined that information about certification does not impact purchasing behaviour unless the consumer has previously purchased certified coffee, indicating that consistent information provided over longer time periods may have more success. The authors also found that there was more visual interest in labels than the certification logo and that a picture of a forest associated

with shade-grown coffee, the focus of this study, was more likely to promote purchase than the logo (Takahashi *et al.* 2018). Considering that BFC has changed their seal relatively recently, it will be important to familiarize its customer base with the new design so that people are aware of what it looks like and represents.

While certifications may be an effective method for protecting and maintaining migratory bird habitat in Latin America, the above-mentioned studies highlight a disconnect between the consumer and the certification which is manifested in the low demand for Bird Friendly coffee (Rathmell, 2017). Without demand, farmers may choose to sacrifice their bird-friendly management for more lucrative and higher-yield strategies. To prevent this loss of habitat for already vulnerable birds, it is critical to determine how to promote both knowledge of and access to Bird Friendly coffee. In Vancouver, Canada, one of the principal reasons for the lack of demand appears to be caused by the problem of access. Coffee shops and stores are a major barrier for consumers as they decide what coffee to sell, and presently, Whole Foods is the only store that is listed on the Smithsonian's map as a retailer of BFC coffee. However, we believe there is potential among other shops, such as those on the UBC campus which have already shown a commitment to sustainability by carrying a variety of other certified coffees, to carry Bird Friendly coffee in the future. Through a series of interviews with coffee shops and the Food Services department on UBC's campus, we sought to determine the values of these stores, the choices they make in stocking new coffee blends, and their perception of their customers' values and purchasing decisions.

2.5 UBC's coffee landscape

The University of British Columbia lists nine unique coffee brands across twelve locations on its website (Figure 5). Our interviews revealed that UBC Food Services operates three Starbucks, two Tim Hortons, and 19 additional locations that sell coffee at UBC. In 2011, SEEDS partnered with UBC Food Services and Engineers Without Borders to mandate that all non-franchise coffee sold at UBC be certified Fair-Trade and Organic (UBC Sustainability, 2011). This decision made UBC the first Fair-Trade campus in Canada and created a large market for Fair-Trade and Organic coffee beans. In 2011, over 11,000 pounds of Fair-Trade Organic certified coffee was sold by coffee stores on UBC's campus. UBC's demonstrated commitment to sustainability presents an opportunity for other coffee certifications to take root under the right conditions, including Bird Friendly coffee.

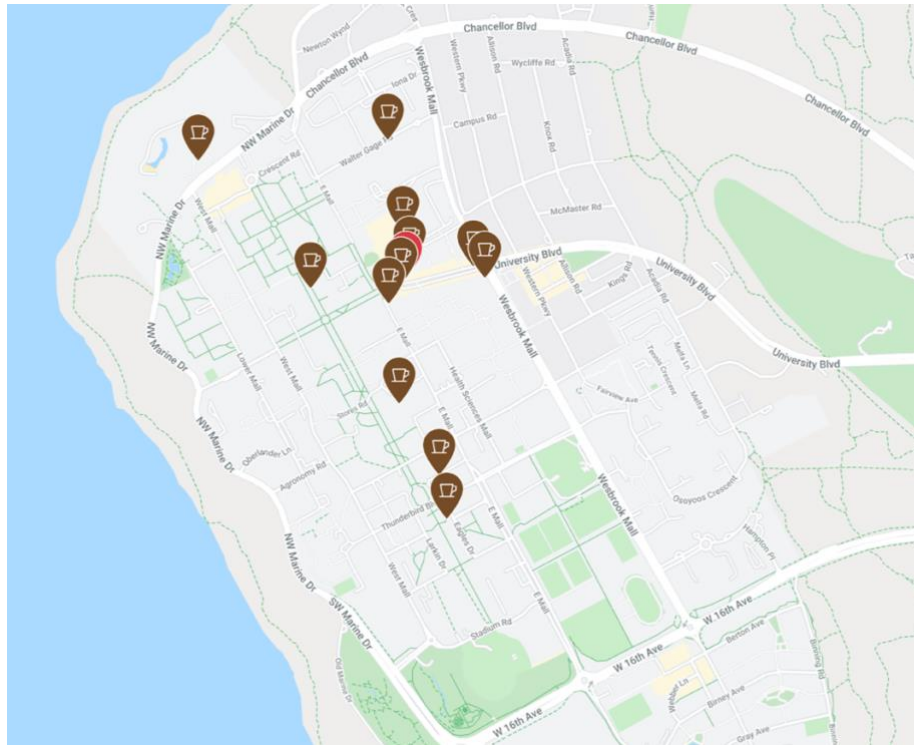


Figure 5. Map demonstrating coffee shop locations (brown cup symbol) on UBC Vancouver campus. Map generated by Google Maps.

3. Methods

We conducted five semi-structured interviews with coffee shop managers and owners that operate on the UBC campus (Table 1). Each of the following coffee shops were approached via email to see if they would participate in our research: Loafe Café, Great Dane Coffee, Café MOA, Blue Chip Café, Bean Around the World, JJ Bean, The Boulevard Coffee Roasting Co., Tim Hortons (multiple locations), and Starbucks (multiple locations) (Figure 6). Interviews were conducted via phone and Zoom calls in March 2021. Before each interview, we acquired a verbal acknowledgement of the ethical consent form and reiterated the confidentiality agreement (BREB ID# H20-01604). We recorded interviews with the consent of every participant, and transcribed the recordings using open-source software. Our interviewees represented six of the nine coffee brands listed on UBC's website, with the UBC Food Services interviewee representing several additional coffee locations. Through interviews with coffee shop representatives, we sought to better understand existing supply chain practices and the barriers that owners may face when providing and selling certified Bird Friendly coffee. Each interviewee was asked questions about their coffee shop's sourcing practices as well as perceptions about their customers (See Appendix A for interview questions). These questions were designed to assess existing coffee supply practices, knowledge about Bird Friendly coffee, and the feasibility of introducing coffee with new certifications.

Table 1. UBC coffee shops by business type, geography, and number of locations.

UBC Coffee Shop	Business Type	Geography	Number of Locations
The Boulevard	Independent roaster	UBC Campus	1
Bean Around the World	Independent roaster	Regional - BC and Alberta	28
Blue Chip Cafe	Independent roaster (operated by the Alma Mater Society)	UBC Campus	1
Great Dane Coffee	Independent roaster	UBC Campus	1
JJ Bean	Independent roaster	Regional - Greater Vancouver	22
Pallet Coffee Roasters	Independent roaster (includes Loafe Cafe and Cafe Moa)	Regional - Greater Vancouver	9
UBC Food Services	UBC (includes 3 Starbucks and 2 Tim Hortons)	UBC Campus	24

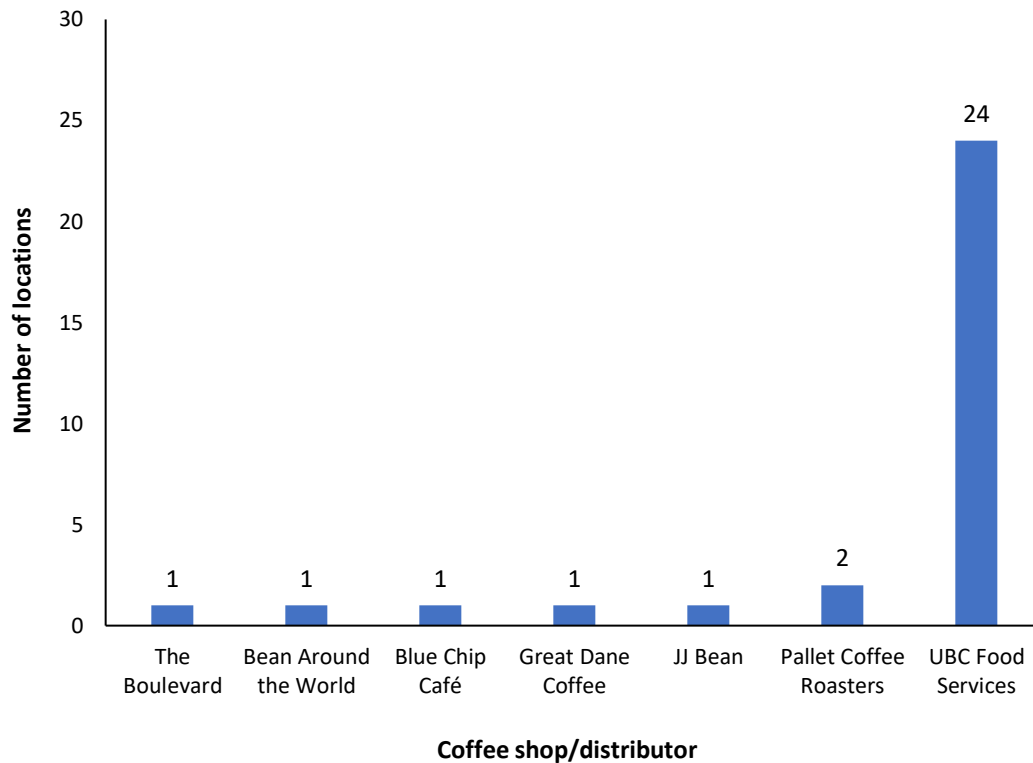


Figure 6. Share of UBC coffee market by number of locations and name of coffee shop/distributor.

Qualitative analysis of all interview transcripts was conducted using NVivo 12. NVivo is a qualitative data analysis software that is commonly used within social sciences for qualitative data management and analysis (Woods *et al.*, 2016). As illustrated in Figure 7, a coding structure was developed using themes from the interview questions and content. Our group then thematically analyzed the interview transcripts, classifying information given by interviewees under the nodes and subnodes in the coding structure. Any emergent themes that may not have been identified in the initial structure were added to ensure that all major themes were identified. Findings from this analysis were used in order to develop recommendations to present to SEEDS. To maintain the anonymity of research participants and the coffee shops they represent, interviewees will be referred to in the analysis section with a designated letter (A, B, C, D, or E).

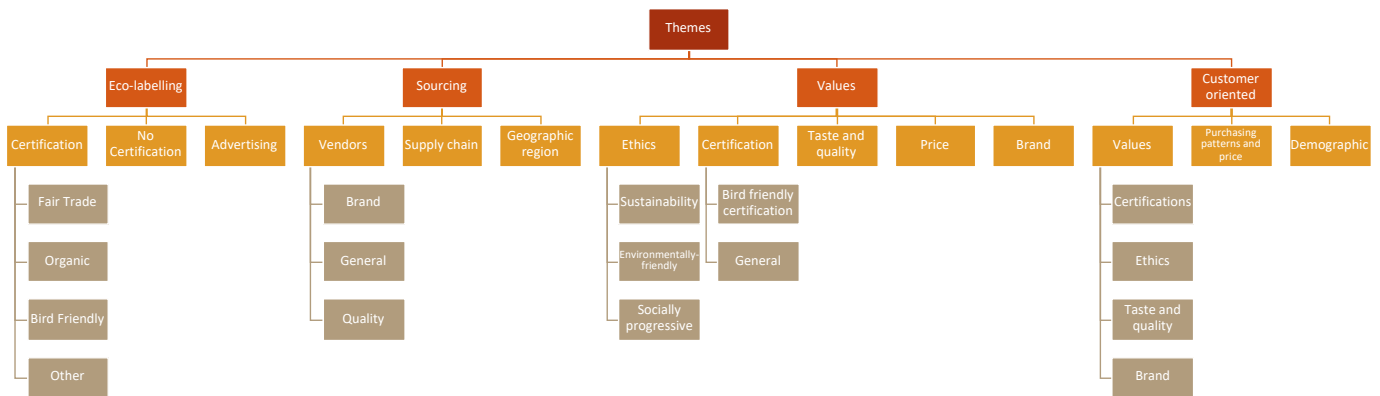


Figure 7. NVivo qualitative coding diagram.

4. Findings and Analysis

4.1 Coffee sourcing and supply

Ethical considerations and taste were consistently the most important qualities that interviewees identified when stocking coffee. Three interviewees (A, C, D) stressed the importance of geographic diversity when deciding which blends to supply, primarily because each region grows coffee with different flavor characteristics. Coffee shops on UBC’s campus source coffee from countries in Latin America, Africa, and Asia. Each country of origin has its own local social and ecological challenges that coffee shops consider before sourcing coffee.

Of the five interviewees, only one had previously heard of the Bird Friendly certification. According to Interviewee A, UBC’s Biodiversity Research Center requested Bird Friendly coffee as a wholesale purchaser. Interviewee A’s coffee shop began sourcing one blend of Bird Friendly coffee to sell to the Biodiversity Research Center, and now they sell it in their coffee shop to other customers. Referring to the Bird Friendly certified blend, Interviewee A stated, “I think it’s our best bean.” To our knowledge, no other coffee shop sells Bird Friendly coffee on UBC’s campus.

Every interviewee viewed certifications as only one component of a larger set of store values and branding. Interviewees described certifications with various degrees of importance. Since all non-

franchise coffee shops on UBC's campus are required to serve Fair-Trade and Organic certified coffee, interviewees referred to those certifications as "the baseline." Additional certifications like Rainforest Alliance are an added bonus to certain groups of customers, but several interviewees suggested that most customers are indifferent. The only coffee shop to sell beans with a Bird Friendly certification on UBC's campus has made a conscious decision to not advertise its ethical sourcing and certification practices in store or on its coffee packaging.

Other interviewees spoke about certifications in less than favorable terms, suggesting that they are employed by "commodity" coffee as a greenwashing marketing strategy. Several interviewees stated their worry that no single certification is complete enough to cover every ethical concern created by the coffee supply chain. Interviewee E stated, "I care much more about the people who are picking coffee," suggesting that a myopic focus on individual certifications may harm the farmers whose livelihood depends on coffee.

Four of the five coffee shops we interviewed employ a coffee specialist responsible for finding and sourcing coffee. Interviewees A, C, and D described how their specialists choose coffee suppliers based on their coffee shop's unique set of values and branding. Interviewee D stated "when stocking new blends, our biggest concern is how it tastes". Interviewee A described how their small independent coffee shop has the opportunity to be selective with the beans it purchases. According to Interviewee A, the coffee shop relies on third-party certifications as a complement to its own ethical standards.

As the representative of a larger regional coffee roaster, Interviewee C described their coffee shop's branding as locally owned specialty coffee. Interviewee C's coffee shop verifies the ethical practices of its coffee suppliers internally through conversations and visits with suppliers. Interviewee C stated that their coffee shop often pays a higher price for "ethically traded specialty coffee" than they would pay for other coffee with certifications. The coffee shop's final packaging makes no mention of certifications, even though some of their blends have them. According to interviewee D, the representative of another regional coffee roaster, although their coffee shop "does not prioritize certifications, most of the farms we source our coffees through do have Organic and Fair-Trade certifications." Interview D described how their coffee specialist first chooses a coffee based on its flavor and geographic profile, and then assures "an equitable and above Fair-Trade wage is paid to all farmers and employees involved."

Interviewee E was the most conflicted about coffee certifications, citing the challenges of procuring the huge volume of coffee that is sold on UBC's campus. Before the Covid-19 pandemic, one interviewee stated that 40 Food Services locations on UBC's campus served 30,000 customers every day. Of those 40 locations, 24 sold coffee. Interviewee E stated that large coffee retailers like Starbucks have a vested interest in the long-term viability of their supply chain, so they voluntarily adopt internal practices related to social, economic, and environmental sustainability. When asked about the possibility of adopting new certifications, Interviewee E responded "it hurts more than it helps. All it does is generate 100 questions." Focusing so much effort on birds, for instance, could potentially raise questions about every other type of animal that coffee affects, not to mention the people who grow it. Additionally, Interviewee C stated, "from a supplier perspective, I believe it would be a bit difficult to introduce [Bird Friendly coffee]", alluding to the complex logistical nature of sourcing and supplying BFC. While every other interviewee would at least consider sourcing Bird Friendly coffee, Interviewee E would not.

Every interviewee stated that roasting location is an important decision after beans have been sourced. The Boulevard, JJ Bean, and Pallet all roast their coffee beans internally in Vancouver. UBC Food Services also prioritizes locally roasted coffee but outsources the process to Vancouver-based Ethical Bean and Milano Coffee.

4.2 Perceptions about customers

Interviewees were hesitant to generalize about their customers, but different coffee brands seem to target different market segments based on their values and offerings. Most coffee shops believed taste and price were the greatest influences for customer perceptions when purchasing coffee on campus. Interviewee B stated consistent quality is the main customer driver followed by price. Interviewee E turned to consumer purchasing data to suggest that price and brand were the main driver of coffee sales. Interviewee E stated that most coffee sold on campus belonged to large coffee franchises that sell inexpensive name-brand coffee. Interviewee C believed trends influence consumer choice especially in terms of taste. For example, what is currently deemed popular when considering taste (such as a specific roast of coffee) or certifications could influence a consumer's coffee choice. Additionally, this interviewee believed that the trendy sense of community that smaller coffee shops instill is another drawing point to their establishment. As coffee certifications are not advertised at almost all UBC coffee shops, interviewees do not believe that most customers are influenced or actively seek-out certified coffee. This was made evident when Interviewee C stated, "we don't get asked a lot about certifications," expressing a similar sentiment as many other interviewees.

Some coffee shop owners acknowledged their prices were higher than franchised coffee shops like Starbucks and Tim Hortons. The main difference of price was attributed to the superior quality of specialty coffee. For some smaller coffee shops, interviewees did not believe price was a major contributing factor compared to taste. Interviewees reported that some customers are not aware of the prices of coffee even when purchasing and will freely spend as much as required. Essentially, customers are cognizant that they are purchasing from speciality coffee stores and are aware that there will be a higher price. When asked if they believed if customers would pay a higher premium for coffee that is certified, one interviewee speculated that their customers already pay more for speciality coffee and would thus not mind paying a premium for environmentally certified coffee. However, many customers are believed to not consider certifications when purchasing coffee according to the majority of interviewees.

Customer demographics was a topic that was often brought up when asking interviewees about customer perceptions and preferences. One interviewee recognized that their coffee shop served a large range of customers, whose understanding and knowledge of coffee differs amongst demographics. Some customers are coffee experts while some are novices; nonetheless, this interviewee felt like it was their job to direct the customer towards coffee they would genuinely enjoy. Sometimes these preferences can be driven by ethics, taste, and price, which tend to be driven by the values of various customer demographics. Although some interviewees believe their customers are not aware of coffee certifications, other larger coffee shops recognized that environmentally focused marketing is potentially beneficial, especially when trying to garner a new customer base. This was evident when Interviewee D stated, "our main demographic is adequately environmentally conscious, and I think they are interested in new products that reflect these values". Interviewee A recognized their customer demographics based on age, an important variable to consider when trying to influence behaviour changes. This interviewee saw the younger customer base as students who value taste and quality over price. Additionally, the younger

customers were seen as more perceptive to trends that could heavily shape behaviours. In terms of the older customer base, the Interviewee A saw this generation valuing the practices of independent and local coffee shops that were grounded in traditions and the support of local economies.

5. Recommendations

5.1 Engage and educate UBC Coffee Shops

Concerningly, only one of our five interviewees had heard of the Bird Friendly certification. The individuals we spoke with play crucial roles in the operation of their coffee shops, including aiding with the coffee sourcing process. If these individuals who deal with coffee daily for their professions are not even aware that BFC exists, we are not hopeful that their coffee shops will offer Bird Friendly coffee to customers. If BFC is not supplied at UBC, customers have no opportunity to purchase it even if they want to. We recommend that SEEDS should establish better relationships with the coffee shops that operate at UBC, as they decide the blends of coffee that are sold on campus. SEEDS could compile and distribute educational materials about the importance of Bird Friendly coffee and supply them to coffee shop management. This strategy might motivate coffee shops that already claim to hold strong environmental values to adopt BFC.

Given that multiple interviewees identified taste and ethics as the most important factors when sourcing coffee, we think that BFC has great potential to be adopted by more coffee shops once they learn about it. The one interviewee who was aware of BFC thinks that it is their coffee shop's "best bean," which should be encouraging to other coffee shops that are hesitant about its quality. SEEDS could organize a tasting day to demonstrate the appeal of BFC to coffee shops with which it engages.

5.2 Lobby UBC Food Services

UBC Food Services is in a unique position among coffee shops on campus due to its great size and procurement power. According to one interviewee, UBC Food Services typically serves over 30,000 customers every day. It operates twice the number of locations that sell coffee than every other brand combined. Thus, it is especially important for UBC Food Services to be involved if SEEDS wants to make the most impact when transitioning campus to Bird Friendly coffee. Given UBC Food Services' involvement in mandating Fair-Trade and Organic certifications in 2011, we think that there is an opportunity in renewing the partnership this time for BFC, which is a natural progression from the existing Fair-Trade Organic mandate. We recommend that SEEDS dedicates extra effort to lobbying UBC Food Services about the benefits and need for Bird Friendly coffee.

5.3 Plant seeds across the city

While UBC is an important hub for sustainability and eco-friendly people, it is not the only place that could be receptive to Bird Friendly coffee. Since SEEDS has partnered with Environment and Climate Change Canada, it is important not to keep the focus too small and to consider branching out into the rest of the city. Vancouver has a strong coffee culture and its residents are known for their concern for the environment, and therefore would be an excellent demographic to tap into

(Tourism Vancouver, 2020). Vancouver was recognized as a Fair-Trade Town in 2010, demonstrating residents' commitments to sustainability issues (Fair-Trade Programs, 2021). UBC might be a good place to start to introduce Bird Friendly certified coffee, but because of both its culture and geography, the campus is a bit of a closed system from the rest of the city. The majority of people who frequent the campus and its coffee shops are students and staff, and it is unlikely to gain many more patrons because the campus is surrounded by water on three sides and a park on the fourth. Due to the isolation of the campus, it is unlikely that Bird Friendly coffee would spread to other coffee shops in Vancouver if it became popular at UBC. Instead, it would be ideal if SEEDS formed relationships with coffee shops around the city and began planting the idea of carrying BFC coffee.

Additionally, there might be an intersection with local government. The city of Vancouver has had 'bird-friendly' action plans in the past that have included strategies to reduce bird strikes and promote bird residence throughout the city. While most of the plans included planting a greater diversity of trees and shrubs or altering building design, there may be an opportunity to work with the city to promote BFC or incentivize shops and stores to carry BFC or to raise awareness about it. It could be incredibly beneficial to birds if SEEDS has the capacity to reach out to the Vancouver city government about BFC.

5.4 The barista is your best friend

From our interviews, we learned more about how the coffee supply chain works and how coffee shops choose their beans. Many of the interviewees reported being careful about their selection of blends, ensuring that the coffee not only tasted excellent but that they fell in line with their ethical and sustainable values. As a result, each coffee shop has an intimate knowledge about their blends and are important resources for customers. Coffee purchasers can rely on a shop's advice and be educated about the certifications associated with various blends. For many casual coffee drinkers, word-of-mouth is a driving force in their choice of new blends (Son, 2010). SEEDS could form partnerships with managers to find ways to advertise BFC to their customers, whether it be through "Ask me about Bird Friendly coffee" shirts or pamphlets provided for customers to pick and read while they are on the go.

5.5 Make the seal salient

We found during our literature review that BFC is not widely known or recognized, even among bird-watchers (Hernandez-Auilera *et al.*, 2019). A few possible reasons for this are a lack of marketing and a need for recognizable and pervasive signage. We recommend that SEEDS engages with the Smithsonian Institute to discuss their marketing and potentially workshop some local-level strategies. The Bird Friendly certification seal has changed three times in the last 20 years, with the newest version only two years old, so BFC does not hold the same immediate recognition of more pervasive and persistent labels like the Rainforest Alliance (Figure 8). It will be important to maintain the consistency of the seal's appearance for it to register and be recognized by customers. However, we also recommend additional complementary marketing strategies to bring Bird Friendly coffee to the forefront of coffee buyers' minds, perhaps through the creation of bird-themed coffee sleeves or collectible bird pins for larger purchases. Establishing the BFC branding involves making the logo both easily recognizable and making its image pervasive so that customers know, at a glance, the values and ethics of any coffee that bears its seal. We recognize that engaging with the Smithsonian is a far-fetched task, but the importance of image and marketing cannot be understated when it comes to customer decision-making.



Figure 8. Evolution of the Bird Friendly certification seal.

5.6 Continue customer research

Our final recommendation for SEEDS is to continue research into customers' knowledge and perceptions of BFC to complement the supplier analysis provided in this report. Our interviewees lacked a comprehensive understanding of their customer base, although several mentioned that some portion of their customers would be interested in BFC. We believe that it is vital to assess the customer angle more rigorously to determine how best to raise awareness of BFC on UBC's campus. We recognize that SEEDS commissioned other research groups to survey coffee customers, and a logical next step would be to integrate their results with our own. Our group believes that if implemented, these recommendations will assist SEEDS in overcoming the lack of awareness about Bird Friendly coffee at UBC and propelling the campus to a more sustainable future where birds can thrive.

6. References

- Auld, G. (2010) Assessing certification as governance: Effects and broader consequences for coffee. *Journal of Environment and Development*. 19 (2), 215–241.
- Bakermans, M. H., A. D. Rodewald, A. C. Vitz, and C. Rengifo (2012). Migratory bird use of shade coffee: the role of structural and floristic features. *Agroforestry Systems* 85:85–94.
- “BC’s coastal biodiversity: the highest in North America”. (2020, November 26). Raincoast Conservation Foundation. <https://www.raincoast.org/2011/05/bc-coastal-biodiversity/>
- “Bird-friendly Coffee FAQs”. (2020). Smithsonian’s National Zoo & Conservation Biology Institute. <https://nationalzoo.si.edu/migratory-birds/bird-friendly-coffee-faqs>
- “Bird-friendly Farm Criteria”. (2020). Smithsonian’s National Zoo & Conservation Biology Institute. <https://nationalzoo.si.edu/migratory-birds/bird-friendly-farm-criteria>
- Campbell, V. (2019, October 9). Vanishing: More Than 1 in 4 Birds Has Disappeared in the Last 50 Years. All About Birds. <https://www.allaboutbirds.org/news/vanishing-1-in-4-birds-gone/>
- Canadian Electrical Stewardship Association (CESA) (2021). Sustainable coffee: 8 ways to green your daily habit. <https://www.electrorecycle.ca/blog/>
- Davidson, I. J., D. D. Fernández, and R. Clay (2011). Important Bird Areas as wintering sites for boreal migrants in the tropical Andes. In *Boreal birds of North America: a hemispheric view of their conservation links and significance*. (J. V. Wells, Editor). 1st edition. University of California Press, Berkeley and Los Angeles, California, pp. 95–106.
- Díaz-Bohórquez, A. M., N. J. Bayly, J. E. Botero, and C. Gómez (2014). Aves migratorias en agroecosistemas del norte de Latinoamérica, con énfasis en Colombia. *Ornitología Colombiana* 14:3–27.
- Elder, S.D., Lister, J., and Dauvergne, P. (2014) Big retail and sustainable coffee: A new development studies research agenda. *Progress in Development Studies*. 14 (1), 77–90.
- Fair-Trade Towns. (2021). Fair-Trade Programs. <https://fairtradeprograms.ca/fair-trade-towns/>
- FPSNSM. Fundación Pro-Sierra Nevada de Santa Marta (1998). Evaluación Ecológica Rápida de la Sierra Nevada de Santa Marta.
- Gómez, C., V. Gómez-Bahamón, L. Cárdenas-Ortíz, and N. J. Bayly (2015). Distribution of Nearctic-Neotropical migratory birds along a South American elevation gradient during spring migration. *The Wilson Journal of Ornithology* 127:72–86.
- González, A., Wilson, S., De Groot, K., & Luszcz, T. (n.d.). Would protecting habitat for migratory birds make you change the coffee you drink? *Environment and Climate Change Canada*. 6pp.
- González-Prieto, A. M. (2018). Conservation of Nearctic Neotropical migrants: the coffee connection revisited. *Avian Conservation and Ecology*, 13(1).

- Hernandez-Aguilera, J.N., Conrad, J.M., Gómez, M.I., and Rodewald, A.D. (2019) The Economics and Ecology of Shade-grown Coffee: A Model to Incentivize Shade and Bird Conservation. *Ecological Economics*. 159 (January), 110–121.
- IUCN. International Union for Conservation of Nature. (2016). *The IUCN Red List of Threatened Species*. <http://www.iucnredlist.org>.
- Jha, S., Bacon, C.M., Philpott, S.M., Méndez, V.E., Läderach, P., and Rice, R.A. (2014) Shade coffee: Update on a disappearing refuge for biodiversity. *BioScience*. 64 (5), 416–428.
- Karp, D. S., C. D. Mendenhall, R. F. Sandi, N. Chaumont, P. R. Ehrlich, E. A. Hadly, and G. C. Daily (2013). Forest bolsters bird abundance, pest control and coffee yield. *Ecology Letters* 16:1339–1347.
- Klein, A. M., I. S. Dewenter, and T. Tschardt (2003). Pollination of *Coffea canephora* in relation to local and regional agroforestry management. *Journal of Applied Ecology* 40:837–845.
- Komar, O. (2006). Ecology and conservation of birds in coffee plantations: a critical review. *Bird Conservation International* 16:1–23.
- Laroche, M., Bergeron, J., and Barbaro-Forleo, G. (2001) Targeting Consumers Who Are Likely To Pay More for Ethical Products. *Journal of the Academy of Marketing Science*. 31 (1), 325–334.
- “Legal protection of migratory birds: overview.” (2020). The Government of Canada. <https://www.canada.ca/en/environment-climate-change/services/migratory-birds-legal-protection/overview.html>
- Moguel, P., & Toledo, V. M. (1999). Biodiversity conservation in traditional coffee systems of Mexico. *Conservation biology*, 13(1), 11-21.
- NABCI. (2016). The state of North America’s Birds 2016. *North American Bird Conservation Initiative* <http://www.stateofthebirds.org>.
- The Nature Trust of BC. (2020, January 15). *About Biodiversity*. The Nature Trust of British Columbia. <https://www.naturetrust.bc.ca/conserving-land/about-biodiversity>
- Perfecto, I., Rice, R.A., Greenberg, R., and van der Voort, M. (1996) Shade coffee: a disappearing refuge. *BioScience*. 46 (8), 598–608.
- Perfecto, I., Vandermeer, J., Mas, A., & Pinto, L. S. (2005). Biodiversity, yield, and shade coffee certification. *Ecological economics*, 54(4), 435-446.
- Ratcliffe, E., Gatersleben, B., & Sowden, P. T. (2013). Bird sounds and their contributions to perceived attention restoration and stress recovery. *Journal of Environmental Psychology*, 36, 221-228.
- Rathmell, L. (2017). *Coffee and Conservation: The Ecology and Marketing of Bird Friendly Coffee* (Doctoral dissertation).

- Rice, R. A. (1999). A place unbecoming: the coffee farm of northern Latin America. *The Geographical Review* 89:554–579.
- Ricketts, T. H., G. C. Daily, P. R. Ehrlich, and C. D. Michener (2004). Economic value of tropical forest to coffee production. *Proc Natl Acad Sci U S A*. 101:12579–12582.
- Rosenberg, K. V., Dokter, A. M., Blancher, P. J., Sauer, J. R., Smith, A. C., Smith, P. A., ... & Marra, P. P. (2019). Decline of the North American avifauna. *Science*, 366(6461), 120-124.
- Şekercioğlu, Ç. H., Daily, G. C., & Ehrlich, P. R. (2004). Ecosystem consequences of bird declines. *Proceedings of the National Academy of Sciences*, 101(52), 18042-18047.
- Siebert, S. F. (2002). From shade-to sun-grown perennial crops in Sulawesi, Indonesia: implications for biodiversity conservation and soil fertility. *Biodiversity & Conservation*, 11(11), 1889-1902.
- Son, Y. J. (2010). The effect of consumer choice attributes on customer satisfaction, revisit and word-of-mouth intention in a coffee shop. *Culinary science and hospitality research*, 16(4), 76-93
- Takahashi, R., Todo, Y., and Funaki, Y. (2018) How Can We Motivate Consumers to Purchase Certified Forest Coffee? Evidence From a Laboratory Randomized Experiment Using Eye-trackers. *Ecological Economics*. 150 (October 2017), 107–121.
- Tangley, L. (1996) Ecology: A Brewing Controversy Over Bird-Friendly Coffee. *Science*. 274 (5291), 1300–0.
- “UBC Names Canada’s First Fair-Trade Campus.” (2011). UBC Sustainability. <https://sustain.ubc.ca/news/ubc-named-canadas-first-fair-trade-campus>
- “Vancouver has quite the coffee culture”. (2020). Tourism Vancouver. <https://www.tourismvancouver.com/restaurants/dining-guides/coffee-culture/>
- Woods, M., Paulus, T., Atkins, D. P., & Macklin, R. Advancing Qualitative Research Using Qualitative Data Analysis Software (QDAS)? Reviewing Potential Versus Practice in Published Studies using ATLAS.ti and NVivo, 1994–2013. *Social Science Computer Review*. 34(5), 597-617.

Appendix A. Interview questions

Category	Questions
Coffee sourcing/supply	Please rank which of the following qualities are most important to you when stocking coffee? a. Taste b. Ethics (sustainability, environmentally-friendly, socially progressive?) c. Price d. Brand e. Certification quality
	Where do you source your coffee from?
	Who decides which kind of coffee is stocked? Is there a process to this decision-making?
	What are your biggest concerns when stocking new blends?
	Have you heard of Bird Friendly coffee certification? What are your thoughts on the certification?
	How important are sustainability labels to you as a cafe?
	How difficult would it be to introduce Bird Friendly coffee into your cafe from a supplier perspective?
Perceptions about customers	Please rank which of the following qualities are most important to your customers when they purchase coffee? a. Taste b. Ethics (sustainability, environmentally-friendly, socially progressive?) c. Price d. Brand e. Certification quality
	Do you think the demographic that you sell to are environmentally conscious and would be interested in Bird Friendly coffee?
	Do you think your customers would pay slightly more for a cup of coffee knowing that it was Bird Friendly certified?
	Do you think that your customers are aware of Bird Friendly coffee?
	How important do you think sustainability labels such as Fair-Trade, Organic, Rainforest Alliance, Bird Friendly are for your customers coffee purchase decision? Are there any that they seem to care about most?