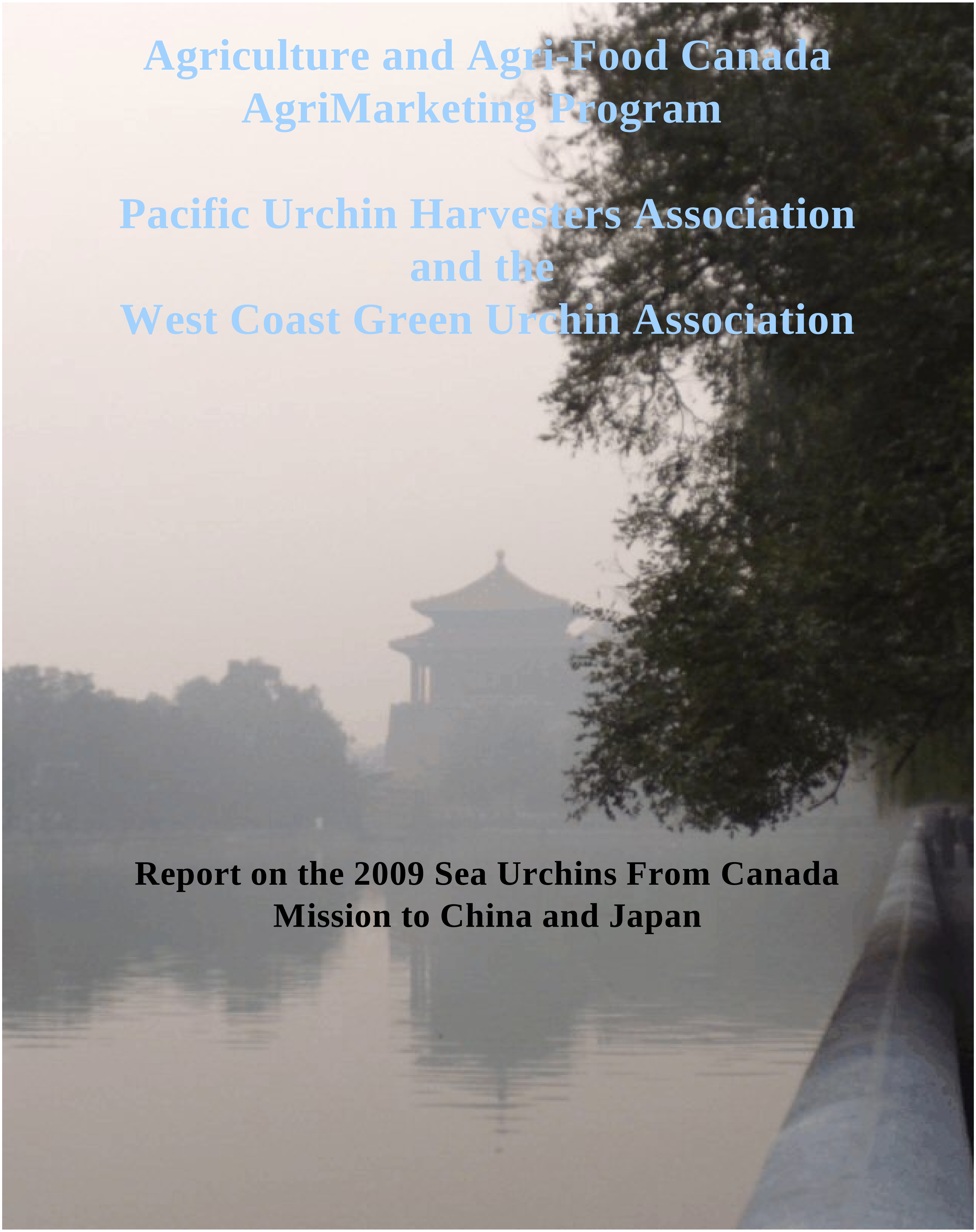

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Report on the 2009 Sea Urchins From Canada
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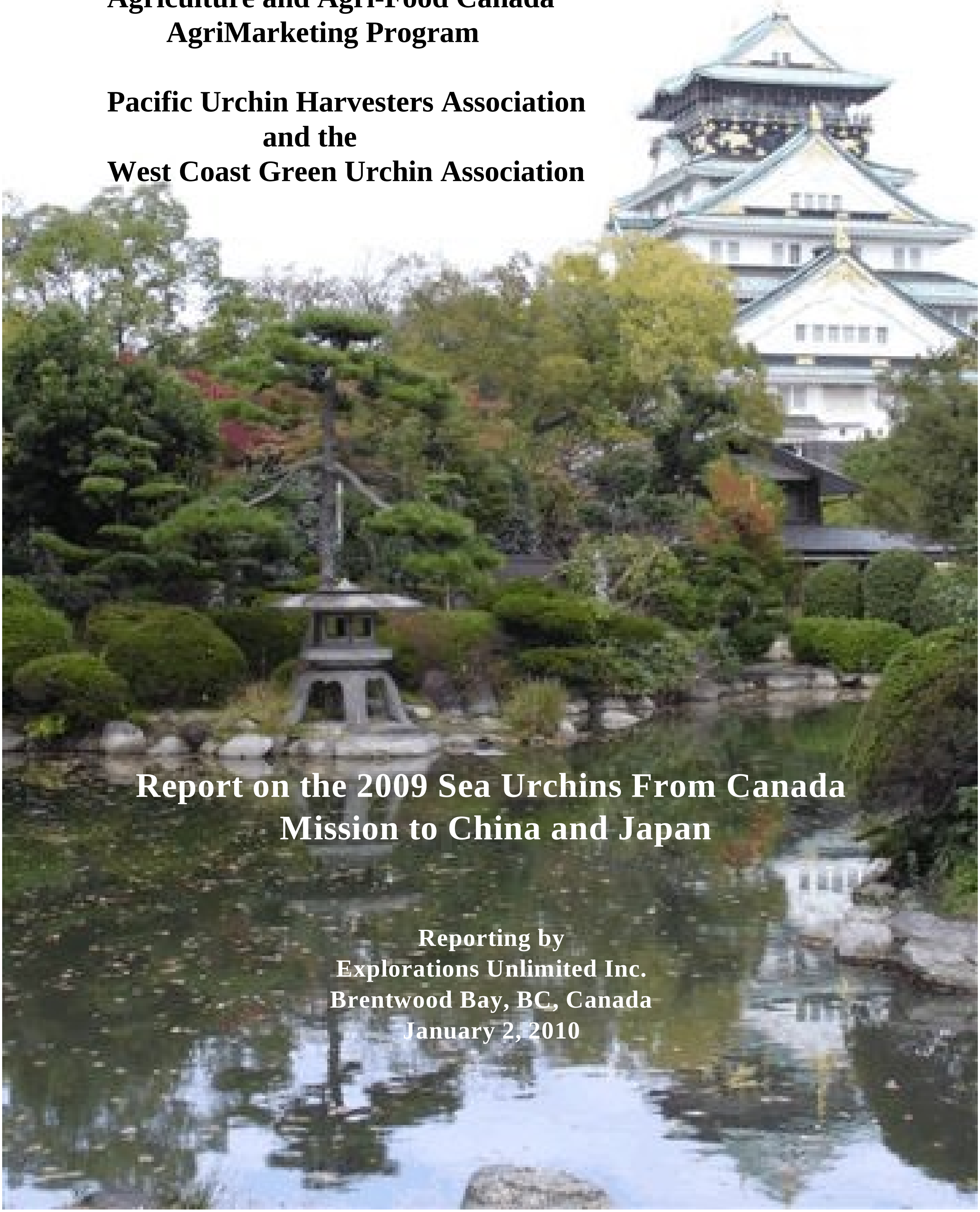

Report on the 2009 Sea Urchins From Canada Mission to China and Japan

Reporting by
Explorations Unlimited Inc.
Brentwood Bay, BC, Canada

January 2, 2010

Report on the 2009 Sea Urchins From Canada Mission to China and Japan

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Acronyms used in document:

- WTO: World Trade Organization
- QA/QC: Quality Assurance/ Quality Control
- HACCP: Hazard Analysis Critical Control Points (a QA/QC methodology)
- ISO 9001: International Standards Org.; 9001 refers to Quality Program standards
- RSU: Red Sea Urchin
- GSU: Green Sea Urchin

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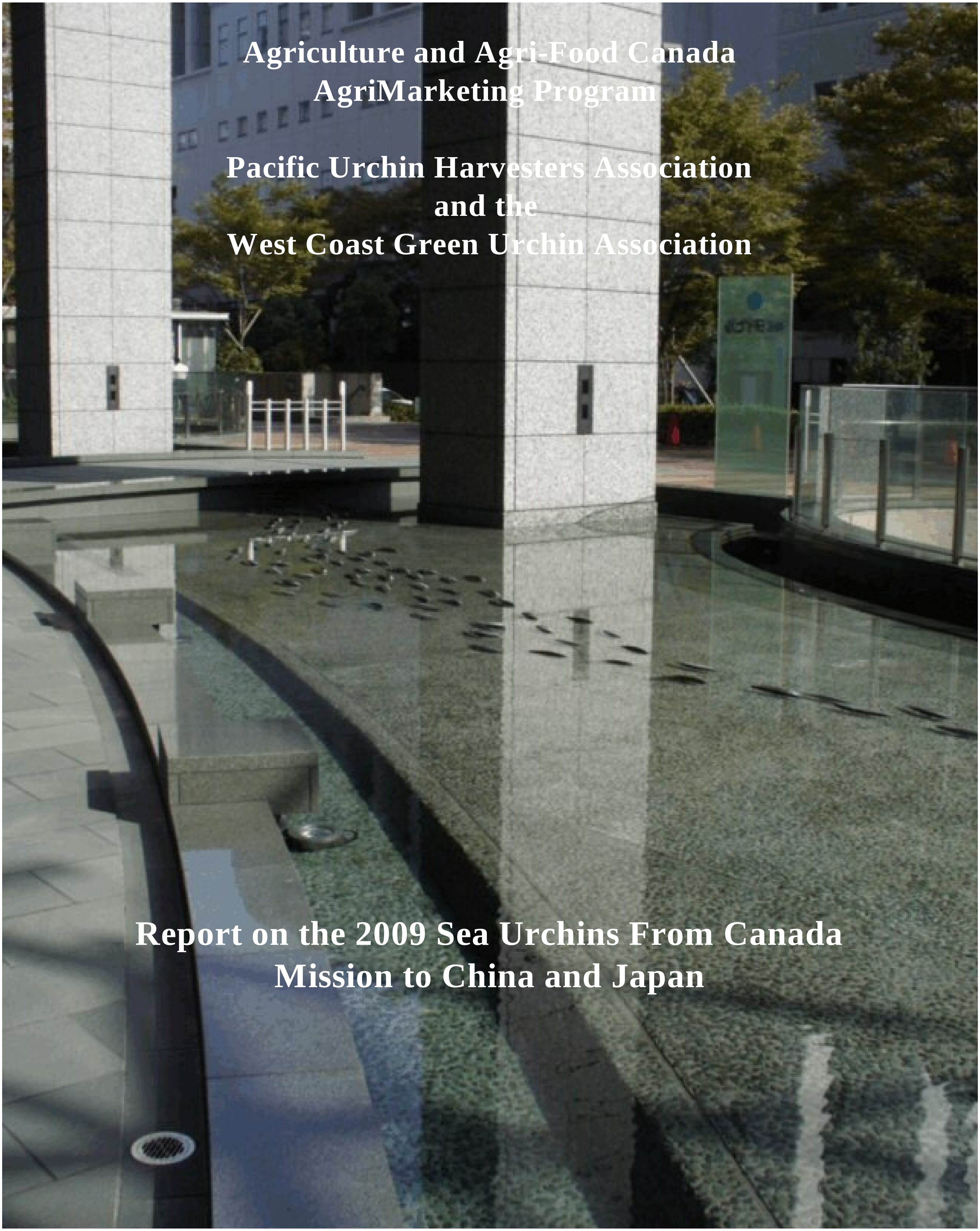

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1.0 Introduction

The Sea Urchins From Canada group, comprising the Pacific Urchin Harvesters Association (PUHA) and the West Coast Green Urchin Association (WCGUA), undertook a mission to the 2009 China Fisheries and Seafood Expo and toured the live and frozen wholesale markets in Beijing to assess some of the seafood distribution infrastructure in that city as part of their 2009 AgriMarketing Program (AMP) project. The Group's primary consultant, Mr. Geoff Krause from Explorations Unlimited Inc., travelled to Japan and met with some companies in the Osaka and Mie regions of Japan to get an assessment of their interest in building stronger business ties with Canadian sea urchin producers and to collect any comments or concerns they might have regarding the BC industry. He also attended a Canadian tabletop food expo as an observer in Osaka and stopped by the Tsukiji sea urchin auction market in Tokyo to observe that market in action. This document is the report on the 2009 Asian Mission.

2.0 China

2.1 Qingdao

The 2009 China Fisheries and Seafood Expo was held in Qingdao in the period November 3-5. This show is generally acknowledged as the most important seafood show and the best place to meet Chinese seafood distributors and retailers. Francis Cheung from Grand Hale Marine Products Ltd, Tim Joys (a Director of PUHA and a fishermen of red and green sea urchins) and Geoff Krause (consultant from Explorations Unlimited) boarded the late night Cathay Pacific flight to Hong Kong on October 31 so they would arrive in Qingdao on November 2 as exhibitors to set up the booths. Mike Featherstone, the President of PUHA, was also planning to attend but he contracted the flu the day before the flight and had to cancel. Mr. Cheung contracted Ms. Daisy Wong from Hong Kong to assist him and an interpreter by the name of Grace was engaged by the SUFC booth to help out. The group was joined on the 3rd by Mr. Pat Fantillo from RBS Seafoods Ltd., a BC sea urchin producer and member of both PUHA and the WCGUA.

Figure 1: Geoff, Grace, Daisy and Pat in the Sea Urchins from Canada and Grand Hale booths at 2009 China International Seafood Show in Qingdao

Grand Hale Marine Products, a major producer of sea urchin products in BC, and the Sea Urchins from Canada (SUFC) group had adjacent booths in the Canadian Pavilion at the show. The previous year both had exhibited as part of the BC booth delegation but that option was not available this year. The Canadian Pavilion was located in the same location as last year and again entertained 13 booths including the Underwater Harvesters Association, BC Sablefish Ass'n, Clearwater Seafoods, Port Fish, AgriMarine Holdings Inc., Agriculture and Agri-Food Canada, booths from provincial booths Newfoundland& Labrador, New Brunswick, Prince Edward Island. This year the SUFC group rented a TV and DVD player to display the group's videos. Unfortunately new versions of the videos could not be produced in time for the show and we were left depending on a version from 2005/06 and on a couple of slide shows put on DVD by Mr Krause. Mr. Fantillo also brought along some DVD footage of green sea urchin and sea cucumber fishermen at work using scuba.

Another major part of the plan had been to display some live green sea urchins (GSU) brought to the show by Mr. Joys. These were unfortunately seized at the Qingdao airport as the country does not allow the import without extensive documentation, inspection and other regulatory oversight of live animals that might hold potential as invasive species. It might have been possible to bring in a dozen or so and stay under the radar but the 150 urchins we tried to get through were simply too obvious. Grand Hale however provided about 5 trays of fresh red sea urchin (RSU) uni and 4 trays of frozen RSU which were sequentially put on display on ice once the booths were set up. Grand Hale also had a number of different frozen products, including hake fillets, sea cucumber, salmon (H&G and vacuum packed fillets) and RSU uni which they laid out in a glass-topped freezer display in their booth.

Figure 2: Entrance lobby for the 2009 China Fisheries and Seafood Expo in Qingdao

The show opened as scheduled at about 10:00 AM on the 3rd. Traffic was not real heavy at any time during the show. The global economic slowdown no doubt contributed but snow in Beijing the day before had caused many flight cancellations and disrupted the travel plans of many. Generally, as last year, the traffic on the second day was the heaviest but this year it seemed it never really exceeded what was seen on the final day of the show last year.

A number of people and companies interested in the products did stop by the booth to discuss opportunities. Sea urchin in general is not well known as a seafood in China at this point and demand is very low. It also appears that there are shortcomings in the knowledge, commitment and infrastructure needed to properly care for a product as tender as fresh uni, although frozen product might be appropriate in some situations if the proper partners can be identified and engaged.

We also heard at least a couple of times that this can change very quickly if the right kind of consumer education and experience programs are put in place. We heard from a number of visitors that the number of Japanese sushi restaurants in China is increasing very rapidly, that Chinese people are generally willing to try eating just about anything and that if they like it, price will not be a issue for very long. However, duties up to 40%, other taxes and border inspections can also be quite onerous and other advice suggested that going through established firms in Hong Kong or Taiwan remain the best and/or easiest and/or most dependable route into China. These jurisdictions also offer the additional advantage of more robust contract law protections although China proper is also improving quickly on this particular score.

Company representatives that stopped by to express interest and/or enquire about opportunities included:

Table 1: List of contacts from 2009 China Seafood Show in Qingdao

Name	Company	Location	Contact info	Comments
Wang Long	Dalong Food Company	China	ph: 13560176663	import frozen
Macy Wong	Piau Kee	Malaysia	ph: 603-4293-8888 em: meishih@piaukee.com www.piaukee.com	interested in fresh/froz/live
CEO	Onew Int'l Group (HK) Co. Ltd	Hong Kong	ph: 86-532-85775236 em: onew@sohu.com	imports proc uni into HK for re-export to China
Lee Wai Kit	Top Joiner(HK) Ltd	Hong Kong	ph: 852-3580-0607 em: topjoiner@netvigator.com c: 852-9432-0094	interest in GRU & RSU owns restaurant & supplies 50+ others
Qui Zhao-Xing	Shandong Mariculture Inst.	Qingdao	ph: 86-532-82655582 em: zhaoxingqui@163.com	professor
Fan Xubing	Beijing Seabridge Consulting	China	c: 13311369269 em: fanxb@seabridge-china.com www.seabridge-china.com	working with UHA on marketing program sim to PUHA domestic progr.
Jasmine Chen	Good Time Ocean Co. Ltd	Taipei	ph: 886-963035221 em: goodtimeocean@gmail.com	interested in fresh or frozen uni
Gao Xianyun	Dalian Rifu Food Co. Ltd	Dalian	ph: 86-411-83401402 em: gaoxianyun@yanming.com	sea urchin + other spp procs, freezes & export to J
Warner Cao	Dalian Zhangzidao Fish. Grp.	Dalian	ph: 86-411-826596668106 em: bccao@163.com www.zhangzidao.com	exports uni to Japan good for GSU process'g
Queen Geng	Shanghai Liandi Seafoods Ltd	Shanghai	ph: 021-5285-8538 em: queengeng@163.com	very interested- no further elaboration
Carol Liu	Qingdao Teamline Co. Ltd.	Qingdao	ph: 86-532-85909802 em: carol@qdteamline.com	logistics into Qingdao same group as next card
Dong Meng	Qingdao Safe Express Ship'g	Qingdao	ph: 86-532-85909869 em: logistic@csesc.cn www.csesc.cn	import -export specialists tied in with above group
Vadim Androsov	Mongoose Co. Ltd	Korea	ph: 82-51-415-6910 em: kbline02@kornet.net em2: norseafood@gmail.com	imports Russian seafood into Korea
Edward Zhang	Liancheng Overseas Fishery (Shenzen) Co. Ltd.	Shenzen	ph: 86-755-2151-3756 em: edward_zhang@ltfv.com www.szicshop.com	
Yu Xiao Lin	Dalian Hongyu Food Co. Ltd	Dalian	ph: 86-411-82031125 em: hangyufoods@gmail.com	
Xiu Xianhui	Qingdao Luhaifeng Group	Qingdao	ph: 86-532-86752047 em: e.m@gdlhf.cn www.QDLHF.CN	
Tracy	Shangdon Searun Int'l Logistics Co. Ltd.	Qingdao	ph: 86-532-86027001 (6877) em: tracy-wang@searun-cn.com www.searun-cn.com	
Yong Pan	Beijing Zhongyang Global Tuna Ltd. Co.	Beijing	ph: 89669988 (hotline) ph2: 64314755 (switchboard) em: 13701373788@139.com www.beijingtuna.cn	very interested but thought price a bit high
David Pawlan	Maersk Line Reefer Mngt, Global Seafood	Denmark	ph: 45-3363-8106 em: david.pawlan@maersk.com www.maerskline.com/reefer	superfreezer reefers smallest = 21 tons rates negotiable

We were also visited by a number of trade commissioners from around China, Hong Kong and Taiwan. Claire Zhu from Hong Kong requested copies of the PUHA video to distribute amongst retail outlets as a promotional tool. Having copies in English should work in Hong Kong but translated versions with Mandarin are definitely recommended for all other areas of China. Cantonese is still the main language in Hong Kong but it is being replaced by Mandarin, China's official national language, even throughout Guangdong Province, its home territory. Claire feels many stores and consumers in Hong Kong and Taiwan at least will be very interested in the human story elements behind the product as well as more details on the water quality, handling and catch area maps using perhaps a Google Earth -based graphical display.

BC also just opened a Trade Office in Beijing, a resource that will be worth following up on.

The show is moving back to Dalian next year. This is reportedly the main seafood processing area in China and is also home to much of the mariculture industry, including sea urchin.

2.1.1 Industry Briefing at the Shangri La Hotel

Xu (Maggie) Yao from the Canadian Embassy in Beijing arranged speakers to provide some insight for Canadian seafood producers participating in the Qingdao show and exploring the Chinese market.

Mr. Kerry Lu described the market situation and forecast for imported seafoods in the food service channel for Northern China, an area which includes Beijing. His company serves high end hotels and restaurants throughout much of China and knows the sector well. The food service sector is driven mainly by international travellers and while the hotels have until recently been slowing since the end of the Olympics last year, the restaurants are still growing. His distribution business has been growing at about 20% per year.

Chinese consumers prefer live fish at the restaurant probably because historically that would be the only way they to know it is fresh. Seafood *per se* is still a bit new to all involved (customers, distributors, cooks, managers etc) which means there is still quite a bit of education needed to bring everyone up to speed on how the products should be treated, prepared and eaten. Many Chinese do not distinguish between freshwater or marine foods. Import seafood is not generally given the required detailed attention and Canadian seafood does not accord a particularly stellar reputation at this point because of what we might label substantial abuse caused by simply not knowing what to and what not to do. Some Canadian players also apparently do themselves no favours by sending along poorer grade material as Mr Lu related to us in a story about how the Canadian oysters he knew from China were not representative of the product displayed in Canada on either coast.

Mr.Kerong Xu: deals mainly with shellfish, shrimp and various shellfish. His company, Shanghai Rongping Seafood Co. Ltd, is building a full service seafood distribution firm and is working with Clearwater Seafoods from the East coast. The demand for seafood in China is increasing in concert with rising living standards and is now spreading from the coastal cities to the interior. He also mentioned that tradition dictates a strong preference for less-processed, even live product forms. There are apparently disparities in the welcome that seafoods get from different regions. For example, products of many sorts, including seafood, from Australia are welcomed more than analogous products from North America. This is no doubt because Australia is a much more active seller in China than Canada or the US and this suggests a change in approach is needed. Long term selling plans are necessary to build momentum but political gestures, such as the upcoming visit by Prime Minister Harper, are very important.

Ms. Jane Li: from Promar Co. Ltd., an agricultural and food consulting company, spoke to market entry analysis and market development strategies for clients in China.

In 2007, food and beverage sales reached $C 122 B in China, an increase of 30% over 2006. Cold storage infrastructure in China is quite sophisticated in coastal areas but is still fragmentary and inconstant in inland areas. Imported seafood is often found in expensive high-end supermarkets but the quality varies widely and this affects perceptions by consumers of seafood. The seafood handling infrastructure and capacity also diminishes, albeit inconsistently, as it is moved to the inland cities.

China is actually best approached as many markets, as opposed to a single market, and the markets are often characterized as first, second and third tier cities but the key point is that there is no one formula that will guarantee success. Basically the trick is to find a niche in a specific geographic area and to concentrate on that with a long term investment and development plan rather spread your efforts around more thinly, always remembering that guanxi (pronounced guan-she) or relationships and personal references are extremely and critically important for success in business in China. Finding a good local distributor or partner is critical to success and the good ones come with an established network of buyers, end users and even regulators.

Travel to China is always important to success if only for the guanxi. Attending a food show is one way to get into it, there are about 160 food trade-related shows every year in China and selecting the right one is also key. If you are dealing with a single large supermarket you will have some continuity as these companies often control all aspects of distribution once it is in their system but if you’re dealing with a small, high end boutique type of store you will have to deal with the importer(s), cold storage, trucking, wholesaler and retailer separately.

The retail sector in first tier cities including Guanghou, Beijing and Shanghai are somewhat saturated with some concentration and consolidation having already occurred so the opportunities seem to be most open in the 2nd, 3rd or even 4th tier cities these days. Some concentration of the Shanghai and Cantonese areas around Guangdong Province are probably the best areas on which to concentrate because they are already notable for higher seafood consumption rates. In South and Central China, people are eating out more in restaurants while in Northern China, including Beijing, saving remains a higher priority. Migration into Beijing is pulling seafood consumption higher.

Even though customer familiarity is quite limited in many areas of China, the demand for high quality protein, including seafood, is increasing. Coastal areas caught it first and the pattern with imported seafood sees them adopting novel non-traditional seafoods followed by a increasing consumption volumes of (perhaps more traditional) seafood items in areas not characterized as seafood consumption areas. The per capita consumption of seafood is projected to rise to 40 kg by 2020. While quality and safety are of increasing prominence, pushed especially by recurring pollution and/or food scandal incidents, price is still probably the most significant factor. Chinese consumers are still only familiar with a very limited number of imported seafoods such as salmon and are easily confused when considering what to do with fillets etc. as they are more used to dealing with the whole fish. Promotions at the retail level can only help but these sorts of programs will require a strong educational component including promotional samples and give-away's, recipe leaflets and labels with nutritional information. Many Chinese consumers are very nutritionally conscious these days and the trend is strengthening.

Basic etiquette: Chinese society is very hierarchal with a lot of respect held for elders. Face is one of the most important things this society and formal dress is a display of respect towards those whom you are to meet. Use common sense and pay attention to the small details, especially on the first meeting. Also bring a small gift, inexpensive is fine - it can even just be a representation of the company or group you work with. There are about 160 food trade-related shows every year in China and selecting the right one is also key.

There was a question from Nova Scotia on what has happened in Macau with the recession, Los Vegas has taken a major hit this past year so the fellow was just wondering if the same had happened in Macau. Last year was not so good because of the change in the China travel policy to Macau which became a lot more restrictive. This has recently changed back again and business has bounced back to just about normal level. The casinos require high quality seafood- and highrollers in the casinos are generally more adventurous. The casinos and high end hotels also have large banquets as they host company conventions.

Bringing live seafood into the country requires an import permit and health certificate etc. before the product is shipped. The requirements for frozen product are different but still daunting. The Chinese government applies very rigorous standards that are often tough to match. Finding out the actual details on the standards is sometimes no less a challenge as the government website is "a bit confusing" and importers often have to simply depend on their buyers. There are also routes for getting product in through southern connections out of Hong Kong and Taiwan where many of the restrictive covenants are simply avoided.

Dorothy Hu, the trade commissioner from Chongqing is very enthusiastic. Chongqing is a fast developing inland market close to the lake behind the Three Gorges Dam on the Yangtze River in SW China. It currently has a city population of about 32 million people and is considered by many to be a 2nd tier city although with the rapid pace of development will soon be a 1st tier. Located about 700 miles NW of Hong Kong, Chongoing is nestled in Sichuan Province, with a population of about 200 million, on the Yangtze River. Cold storage and the associated transportation infrastructure has been developing very quickly and they have been doing near-continuous seafood promotions since 2005. Right now in the Chongqing market, 5-7 Canadian seafood products can be found. High end restaurants and hotels also carry many of these products including frozen BC spot shrimp, oysters, lobster, sea cucumber, etc. In Chongqing there are not many active importers but there are quite a few distributors each of which generally have sales volumes in excess of 100 M Renmimbi (RMB) per annum.

2.2 Beijing

On Saturday November 7 2009, Tim Joys and Geoff Krause joined Jamie Austen and Chris Sorenson from the UHA and four others from Newfoundland Labrador for a tour of the leading wholesale live and frozen seafood markets in Beijing arranged by Xu Yao (Maggie) and Claudia from the Canadian embassy in Beijing. The representatives from the UHA and Newfoundland and Labrador attended only the first tour at the live market while Tim and Geoff hung in.

2.2.1 Live Seafood Market

We met with the President of the market, Ms. Zhao and operations Manager Mr. Li for about an hour and a half. The proper name for the live market is the Jingshen Seafood Wholesale Market and it is the most important such market in Beijing. Our visit at 0500 hours was timed to cover the busiest activities as agents for restaurants, luxury hotels and other retail outlets mix with the venders to supply their clients for the day. The majority shareholders for the market are two state-owned enterprises, Beijing Second Commerce Group Company Ltd. and the Shenzen Phuket Seafood Market Company Ltd., which is listed on the Shenzen stock exchange.

Figure 3: Outside vendor compound at the Beijing live seafood market

The market opened in early January 2006 and now records a daily volume of about 137 MT of various products. It serves the whole northern half of China and was named as the most trusted public market in 2007. The market handles about 5,000 species worth about 5 B renmimbi (RMB) each year and receives most of its revenue through space rentals of about 800 stalls to independent venders which have about 4,800 staff. The market itself has about 140 employees. The market currently covers an area of about 50,000 square metres with a further 50,000 square metres coming in short order. The market is comprised of specific business areas centred on live seafood, frozen food, the aquatic products trading floor, dry spices and shellfish and crab.

Supporting infrastructure includes Quality Assurance/Quality Control testing laboratories, apartments, banks, and large scale seafood restaurants. The market is considering setting up its own trading company but will focus more on providing enhanced logistics and cold storage to them to avoid competing with its existing clients (tenants).

Figure 4: Vendor with live tanks in Beijing wholesale live seafood market

Canadian items in the market include Dungeness crab, Atlantic lobster and Geoduck clams. The Dungeness crabs are the biggest seller as the price is acceptable and the taste very good. The daily volume averages about 2.5 MT. Atlantic lobster also do fairly well but must compete directly with the better known Australian (rock) lobster. The prices for each are about 260 and 360 RMB per kg. The geoduck clams are not as successful as they compete directly with the much cheaper Mexican product. The market mistakenly thought some of the product was sourced from the US but this is simply product from Mexico that has been re-exported to China. Geoduck from Mexico cannot be sold in the US as Mexico growing waters do not have the required health certification as they have no water quality monitoring or testing program. There was some question as to why Canadian geoduck, at more than 360 RMB per kg., were so expensive in relation to the warmer water Mexican product (160 RMB/kg.), but they accepted the simple response that its quality and taste is simply superior. Most of Canada’s production is sold in southern China.

A major concern on the Canadian side is the 40% tariff applied by China on fresh and live seafood. The tariff levels are set according to species, as opposed to which country they are sourced, and were supposed to be reduced as a condition of entry into the World Trade Organization (WTO). It has yet to occur. The customs people in Beijing are much more diligent than the customs in southern China and substantial “grey market” product is distributed from Hong Kong. The mortalities are higher through these routes but because the tariff is avoided the price at sale is reduced and demand remains strong. The same holds for about half of the lobster available in the area- it is transhipped from the south to avoid the tariffs.

On the quality monitoring at the market, the product of each vender is randomly sampled every day to ensure they are meeting the quality and safety requirements. Each of the functional areas making up the market has its own quality inspection officer. The water quality, apparently including temperature and bacterial load, are similarly monitored.

Figure 5: Live sea urchins sold in Beijing market

They do not have any plans to establish an auction component in the market to increase transparency in pricing. The number of sushi restaurants in Beijing is increasing but the biggest seller is still salmon and perhaps tuna. Sea urchin is still not widely known and quite rare in them. The price of live cultured sea urchin from Dalian offered for sale in the market was about 40 RMB (~$C 5.70) per kg. This is likely beyond the budget capacity of most consumers but there is at least a small nascent market for sea urchin in China. The wholesale price required by Canadian processors to sustain their effort is reportedly about $C 9.00/kg.

The market is also the first in China to establish a seafood restaurant called Snack City on site where consumers can buy a product, take to the restaurant and get the chef to prepare it for them. There is another high-end seafood restaurant on-site that is suitable for prestigious business meetings which accounts for a considerable portion of the markets turnover each day. This model is now being copied by other markets all over China.

There appears to be an increasing emphasis on getting consumers into the market to buy products directly. This brought up a question on the importance of the general cleanliness of the market and its impact on the perceptions of consumers of the healthfulness of the market’s offerings. The market has staff dedicated to cleaning the market and making sure everything is presented

Figure 7: On-site retail store in Beijing wholesale market.

properly. The consistency of this claim with reality as defined by Canadian standards was questioned as we toured the market but one must also remember that here we might be considered a bit fragile. To be fair, the most active period was only just finishing and cleaning efforts may well have had their desired effect over the next couple of hours.

Figure 6: Canadian delegation at the Beijing live seafood market with attached custom seafood restaurant in background.

2.2.2 Frozen Wholesale Market

Tim Joys, Geoff Krause, Xu Yao (Maggie) and Claudia visited Mr. Li the General Manager, and Ms. Zhou Xiao Xia, the Deputy General Manager of the Beijing Frozen Foods Wholesale Market, also known as the Beijing East Friendship Food Service Corporation. This company is a large State Owned Enterprise integrating cold chain logistics, meat cutting and sales, cold storage and specialized underwriting and marketing services. The company owns 7 such markets and this facility is the largest cold storage in Northern China. The cold storage can be adjusted between 0°C - -25°C , although they also have some super cold capacity where the products, mainly tuna caught by state-owned trawlers working fishing grounds around the word, are held at -56°C. Most of the products handled are produced locally but many import items are also included. The total freezer capacity comprises about 220,000 m^3 and the facility, including the wholesale market, serves the whole northern half of China. The turnover for the market is between about 5 - 6 Billion RMB each year.

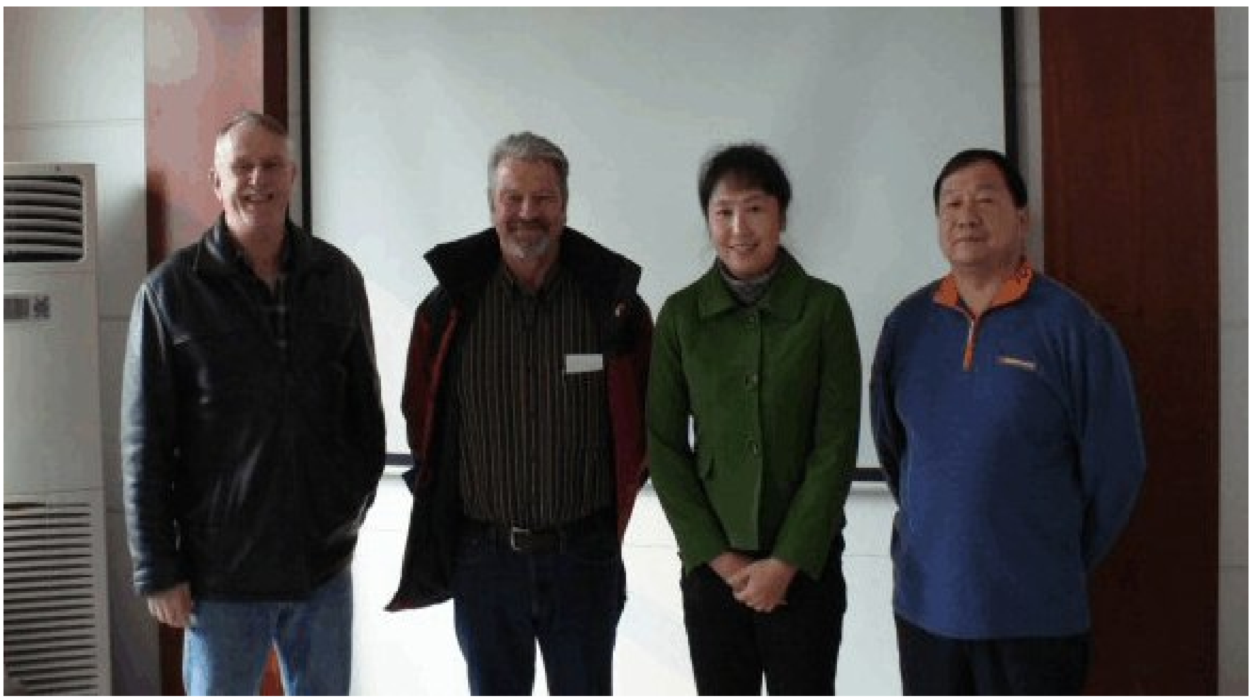

Figure 8: Geoff Krause, Tim Joys, Ms. Zhou and Mr. Li in Beijing.

The organization chart for the company has 5 profit centres covering the cold chain logistics and a specialized wholesale market. These are the food inspection centre, quality control centre, accounting centre, IT centre and training centre. The QA/QC capacity is fully accredited with ISO 9001 and HACCP and has a solid reputation for reliability. The training centre provides advanced training for employees and is also used to host company conventions and large meetings etc. The facility also employs advanced video surveillance with centralized monitoring of up to 208 cameras installed throughout with the result that there is not a corner of the market that is not covered. The information technology centre collects and analyses information relevant to the business from right across Beijing and passes the results on to the venders in the market.

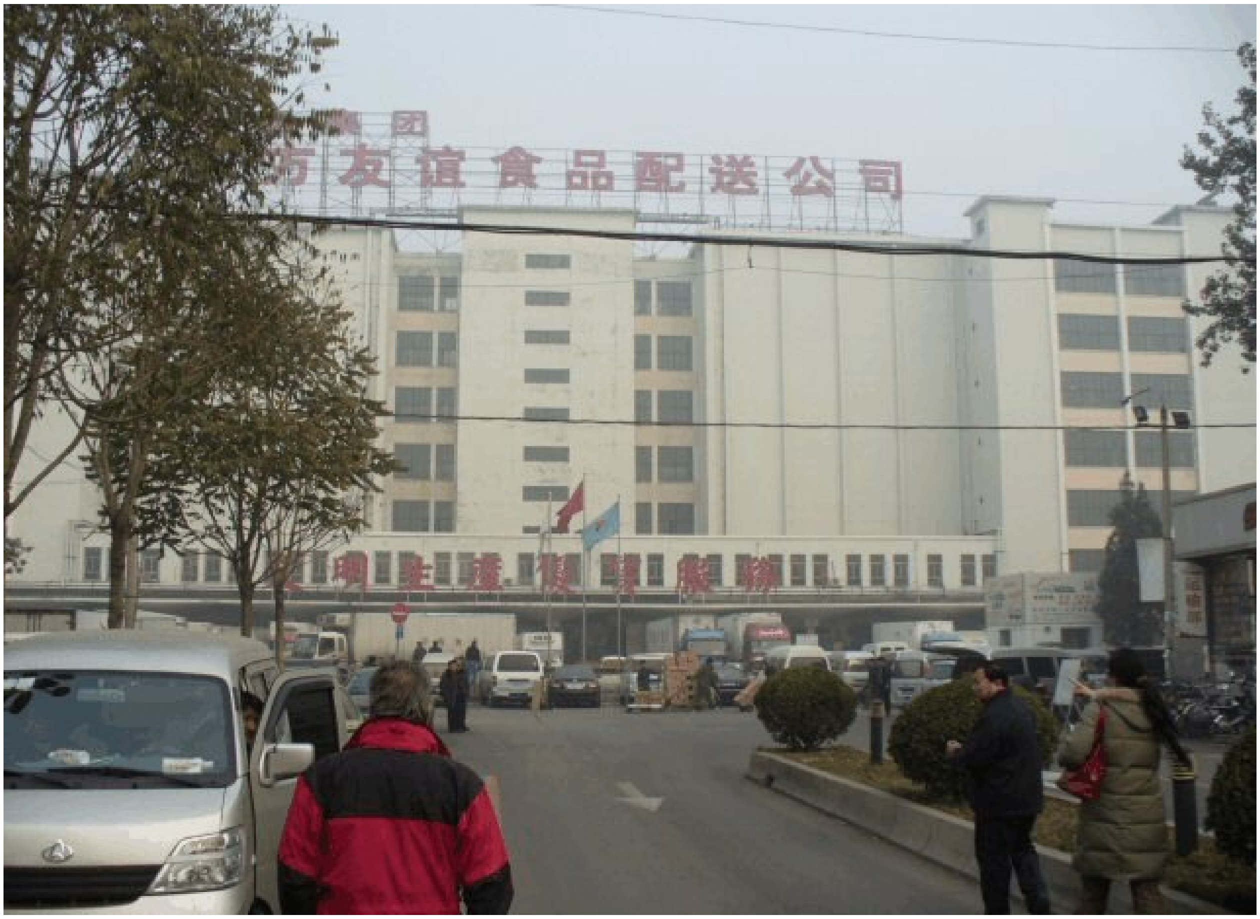

Figure 9: Freezer building of the Beijing Frozen wholesale market.

A new cold chain logistics firm has also recently been added to the mix. This firm was incorporated in late 2006 but it is already a leader in the sector for all of Beijing. This service allows the provision of an uninterrupted cold chain assurance right to final delivery.

A sales company responsible for holding national and municipal food reserves, including meat and seafood, is also part of the corporate mix at this facility. This so-called state reserve must be kept full all the time and product is constantly cycled through it. This is called Department 34 and is the supplier of most of the big, even international events in Beijing including the Olympics, the African forum and the like. All of the hotels serving the international clients, including during the Olympics, are serviced by the company. The company also has a Friendship retail market in the Embassy District that caters to the embassy staff. Maggie and Claudia are both familiar with this shop. Another significant contract served by this Department occurred during the Olympics for a group from the US called BTS which managed all the media. The same catering services were provided for the recent grand parade in Beijing celebrating the 60th Anniversary of the Peoples Republic of China when approximately 480,000 meal packages were supplied. They also supply the National Peoples Congress meetings whenever they are held and other such events. In short, they are well experienced in large scale catering at all levels of complexity.

Figure 10: Vendors wholesale market in the Beijing frozen wholesale market facility.

With regard to the wholesale market proper, the area of the wholesale market itself is 11,000 m^2. This market sells refrigerated meat, poultry and seafood as well as dry salted foodstuffs, condiments and the like. There are about 450 vendors working on-site which are again independent, as was the case at the live seafood market we visited earlier, while the company has about 800 employees proper. Mr Li and Ms. Zhou were disappointed they could not attend the Qingdao seafood expo as it is the most important trade fair for seafood in China and is the best place to present high quality seafood from Canada. All of the seafood venders involved in the market attended the show and only returned to Beijing the day before our meeting, one day after the expo in Qingdao ended. Some of these venders drove the distance and have not yet returned to their space in the market.

Figure 11: A typical booth in the frozen market

With regard to products from Canada in the market, cold water shrimp and halibut are probably the most prominent. Atlantic lobster is also being strongly promoted in this market over the past couple of years as well, while Canadian sea cucumber has recently been added but is not well developed as yet. All of the venders recognize the nutritional quality of the Canadian product but problems remain with the presentation and size. These are a little bit novel for this part of China as the Canadian variety has features which have thus far limited their success in the Northern China market because they conflict with the traditional culinary and cultural practices and preferences. For one thing, they are larger than the preferred size. Traditionally sea cucumbers are served whole in Northern China - but this is not feasible with the larger Canadian product. They also have smaller spikes than the traditional cucumbers. With regard to the meat in particular, it is not eaten in that form to the same degree as it is in Southern China around Hong Kong and other Cantonese areas. Around Beijing it is used mainly in stir fries and is quite novel.

Mr. Li generally follows the promotion trends as it is his business and he has noticed the increased activity with lobsters. Maggie asked for a copy of his business card so she can make sure he gets copies of the Canadian AgriFood newsletters which deal with Canadian seafood developments. He expressed a desire to share more such information in the future with us and with the vendors at the market. Maggie said she would translate any information we supply, including perhaps any notes we get of these meetings, and would pass them along to Mr. Li

Seafood is the oldest component of the business, and probably the most competitive, and considerable consolidation amongst the dealers is occurring as they are often specializing in single species. This has led to some monopolistic behaviour where one vendor controls the price of the product for the whole Northern China market. About 15% of the venders are involved in the seafood trade. In general, the seafood market is very fruitful in China and diligence and hard work should be very rewarding. As far as their market experience goes, seafood is the most profitable sector with returns on investment approaching or exceeding 30% per year.

The Northern China market has not encountered much, if any, sea urchin product, frozen, fresh or otherwise. This was also the case with cold-water shrimp up until recently and that market worked up from a very small base about 15 years ago to a point now where that product is now very big. The program required a training and education component to familiarize chefs and consumers on how to utilize, prepare and eat it. The same is required for sea urchins and it will require some investment as they are virtually unknown to Chinese consumers at this point. Mr Li maintains that the same growth potential seen with the prawns/shrimp holds for the urchins. In this regard it sounds like some of the general lessons we learn from our new domestic marketing program may be similarly applicable to a program in China, although they may be quite different in the details. Chinese people love food and he feels the potential for uni here is immense. They will eat anything and money is no object if they feel it is good.

Companies in Canada with Chinese principals, including Paladin and Grand Hale, may prove a distinct advantage for moving into China as they already understand how the Chinese market(s) work and what is needed to build the trust and structures to conduct business in China. They also suggest recruiting from the Baiyangdian clan from Heibei Province, a place renowned for fresh water products, as they have considerable experience in (especially) frozen seafood. Most Chinese people involved in frozen food business are from this clan. Live or fresh product should go through another clan.

3.0 Japan

The second half of the trip basically focussed on Japan and more specifically on exploring opportunities in the Kansai region around Osaka and Kyoto. The goal of the meetings was to determine if there was any interest on the part of the Japanese firms to establish business relations with suppliers of BC sea urchin products and to discuss any information, concerns or issues they were willing to share with regard to the Canadian supplies or suppliers, Japanese market conditions and projections as well as any other international market opportunities that we might be able to address together through a joint venture arrangement. Five meetings over a four day period with companies in the Osaka - Kyoto region were set up. One meeting scheduled for the Table Top event at the Ritz-Carlton Osaka was cancelled but the other four carried on as planned. Following these, Mr. Krause proceeded to Tokyo to check in on the Tsukiji uni auction market.

3.1 Osaka

3.1.1 Maruwazu

After arriving in Osaka on Monday, November 9, Mr. Krause met with an interpreter, Ms. Emi Watanabe, and together they proceeded to Maruwazu Trading Co. Ltd. to meet with Mr. Hideki Nakai and Mr. Takahiro Shiotani. Mr. Nakai and Mr. Shiotani are responsible for Red and Green Sea Urchin for Maruwazu respectively. Paladin International Food Sales is a current supplier for Maruwazu.

Paladin provides primarily bulk packs to Maruwazu currently but this causes a bit of a labour bottleneck for Maruwazu as they must get crew in to re-pack bulk trays. This is especially disruptive around Christmas and they were forced to shift suppliers last season for this reason so they are hoping to get more trays and fewer bulk packs from now on.

The economic situation in Japan now is weak and sales of luxury items, including high cost seafood like uni and nights out at restaurants etc., are down. The demand for uni for at-home use, and therefore supermarket sales of uni, is standing up as at least somewhat as consumers eat at home as an economizing measure in these tough times. Price right now is the primary consideration and demand for C grade at (say) $C 50/kg is considerably better than that for A grade @ (say) $C 80. Trays again were identified as the preferred form.

The collapse of Kiku Fisheries a couple of years ago is still reverberating around Japan and many buyers remain concerned about the stability of the surviving companies and the Canadian industry in general. Conditions in the uni market are now very tough and there are also a number of Japanese companies that have not survived. They actually raised this a couple of times as a serious concern in a number of source countries, including BC, California and perhaps less so in Chile, but kept reiterating their need for a consistent flow of product for their buyers as the rationale behind their strategy of maintaining diverse sources of supply. This has not been a subject of much discussion around the industry in Canada but their repeated references to it have definitely flagged it as something that should be talked about more. At the very least they would like to know which company(ies) are the most stable and they are always looking for updates so they can control their risks at least somewhat.

They are also cognizant of the need to keep Canadian boats and crews at least somewhat keen, especially during the highest demand periods and understand that Christmas is an important season for Canadian fishermen. Accordingly they generally pay a higher price at Christmas to promote stability and to ensure steady supplies to satisfy the increased demand from their clients around Japan.

With Japanese fisheries co-ops, they are increasingly having difficulty getting young people interested in commercial fishing and they are now bringing in migrant labour to work some of the grounds. The conversation also included a few bits on the potential use of robotics, an area where Japan leads the world by a considerable margin, but Maruwazu had no news on such technology for use on the processing side in Japan. They did mention that a company in Newfoundland and Labrador had tried a few such things out as a means to decrease labour costs and increase precision but that nothing had come of it. Development of an automated shell cracking and roe extraction/wash capacity for use in remote ports on the North and Central coast could lower costs and increase access dramatically.

We discussed the need to comply with traceability requirements and the value of information on the holding temperature, fishing area, fishing vessel, transport times etc. Having a standardized format throughout the whole supply chain so everyone can use the information is key, especially if it is used and transferred electronically. Everybody is interested in it to a certain degree but they would limit the amount passed along to the retail level because there are times when the product is held in the cooler for a few days and it is in everyone’s better interest that the customer remains unaware of it. If that information were always available, customers would buy only the freshest lots and wastage would increase.

A question on the orientation of the urchins once they are out of the water as a potential factor affecting quality of the urchins was raised by Mr. Krause. Holding the urchins upside down has been suggested as the preferred orientation for GSU shipped live and as a means to keep the water in the shell longer to increase survival of urchins destined for live hold systems. It stands to reason that this keeps the urchin alive longer, the uni more hydrated thereby extending the shelf-life of the processed product. No other additional effects/impacts of orientation have been explicitly investigated to the best of their knowledge.

We also heard of companies importing processed urchin products into China for that market while attending the seafood show in Qingdao and this was likewise raised in the conversation. Marawazu has similarly considered the idea and has checked into things at least a little bit. Of course they made no commitment on this, and none was asked for or expected, but they appeared somewhat interested in the idea of bringing in processed Canadian uni for re-export to China. One absolute requirement will be a trusted business partner in China to handle local matters. Another will be health certificates for the product and presumably the processor. They understand that obtaining these from Canada as required will not present a problem.

3.1.2 Ocean Trading Co. Ltd.

Meetings the next day commenced with Ocean Trading Co. Ltd. in Kyoto, about a 40 minute train ride from Osaka. Mr. Krause and Ms. Watanabe met with Mr. Naoki Kaneko and Mr. Yasuhiro Hida, a Director and Seafood Department Subsection Chief respectively. The company has a 25 year history and has been buying sea urchin from Eastern Canada, Russia, North Korea and Chile. The company does not have any urchin business with any BC companies currently but does deal with BC black cod and spot prawn through Calkins and Burke, Harbour Marine and Lions Gate. They expressed interest in establishing ties with urchin producers in BC, both live GSU and processed RSU, as they are always interested in diversified sources of high quality uni. They were actually planning a trip to Hokkaido to meet with processors the next week (November 16- 20) to arrange some uni supplies.

They asked about the scale of the BC urchin fisheries and were informed the TAC for the GSU and RSU fisheries are about 200 and 4500 MT respectively, which makes both actually pretty small. Still they consistently run into shortages in January and February and would like to make a connection with some BC suppliers.

We discussed the traceability issues as before. They understand most Canadian uni sales are more to restaurants in Tokyo and less to supermarkets which suggests the full range of traceability options are not required. They reiterated Maruwazu's point that too much detail probably would not be beneficial as product held in coolers for a few days would tend to be passed over for fresher product, thereby increasing wastage. Still they felt some chefs might be interested in background "story" information by area so they could contribute to the mystique and personality of the Chef's choices as part of their own Brand. I heard a few times on this trip that "the Chef is the Brand that counts". I don't believe you meet many Chefs who would disagree.

Branding campaigns are a specialty of Ocean Trading and they use it to add value as a marketing agency for their clients, and including restaurants and processors. Here available specialized information from the area, the harvester(s) and the processor involved etc can be used to build a story around the product which can then be used as retail support for various types of customers. A similar and better known campaign would include the Copper River Sockeye out of Alaska.

The company's website (www.oceantrading.co.jp) outlines how they are promoting "Branded Seafood" in close cooperation with their overseas suppliers. They claim they are unique among seafood trading firms in Japan in this regard and that it gives them the capacity to provide feedback to their suppliers on what Japanese buyers and consumers want from those products. They maintain that successful branding campaigns require specific identifiable characteristics which differentiates the product from other sources. This could be taste, colour or texture etc. and they had some questions as to whether sufficiently unique characteristics were possible. Still, they are apparently willing to give it a try. They looked at the same sort of idea around Adak in the Aleutians in May 2007 when they chartered a local vessel, collected an Alaska Department of Fish and Game biologist and brought in some east coast urchin divers to check out the stocks up there. There were plenty of urchins (*S. droebachiensis*) around including some in barrens but generally there was quite a bit of feed from what they were saying. Still all the urchins were "skinny" and it sounded like they had possibly spawned out in April during the spring bloom.

3.1.3 Tour of supermarket

We toured a large supermarket anchoring a good-sized mall by the train station in Kyoto. According to Ms. Watanabe, this is not the kind of store typically used for weekly or even daily shopping as they tend to be more expensive than smaller neighbourhood markets even though they apparently have somewhat wider variety of goods/items on sale. The store had a sizable seafood section, although not much larger than what is typical in Canada, but no uni trays were out on display or available for sale. They did have some bottled uni with prices ranging from ~¥1,100 to ¥ 5,200 for 60 gram bottles for purple and bafun uni respectively. 100 gram bottles of the bafun were also on sale for ¥10,000. The bafun uni comes from the sea urchin *Hemicentrotus pulcherrimus*.


Figure 12: Mall with supermarket at train station in Kyoto.

We also had a bit of discussion on the relative merits of Kyoto as opposed to Osaka. Kyoto is much smaller than Osaka, and more intimate because it is less-intensively urban and less expensive. It is more like a university town with a high proportion of ex-pats (for Japan) and does not have much in the way of a subway or underground malls because the abundance of archeologically significant sites and artifacts drives up costs of any excavations.

3.1.4 Takemi

Mr. Krause and Ms. Watanabe travelled to the south of Osaka about 2/3 of the way out towards what is apparently a fishing centre maybe 40 km SW of Osaka to meet with Ogino Tadayuki from Takemi. Takemi imports uni Red and Green Sea Urchins from the US, Mexico and Canada. They last imported RSU uni from BC about 3 years ago and judge the quality of that product from the US, Mexico and BC as #1, #2 and #3 respectively with the Canadian product in particular being too dark for the best rating in spite of a fairly consistent high rating for taste. The colour grading was mentioned as a bit variable as well and Mr. Ogino felt the use of colour charts would help standardize grading throughout the industry.

About 2 years ago currency exchange movements pushed the price for Canadian RSU up so it was about ¥1,500 more expensive than the corresponding US product. Prices on imports from the two countries have since re-balanced so they are again about the same, again because of changes in the currency exchange rates. I have included a graph tracing the exchange rates over the past 9 years and the only place where this sort of change occurred was between May 2007 and September 2008 when the C-buck was a round par with the USD. It is a bit funny though as information on this side of the pond has generally maintained that sales are always settled in US currency so the value of the C-buck is irrelevant when it comes to pricing. It is, however, critically important to profitability for the processors. There would seem to be a need for further clarification on this.

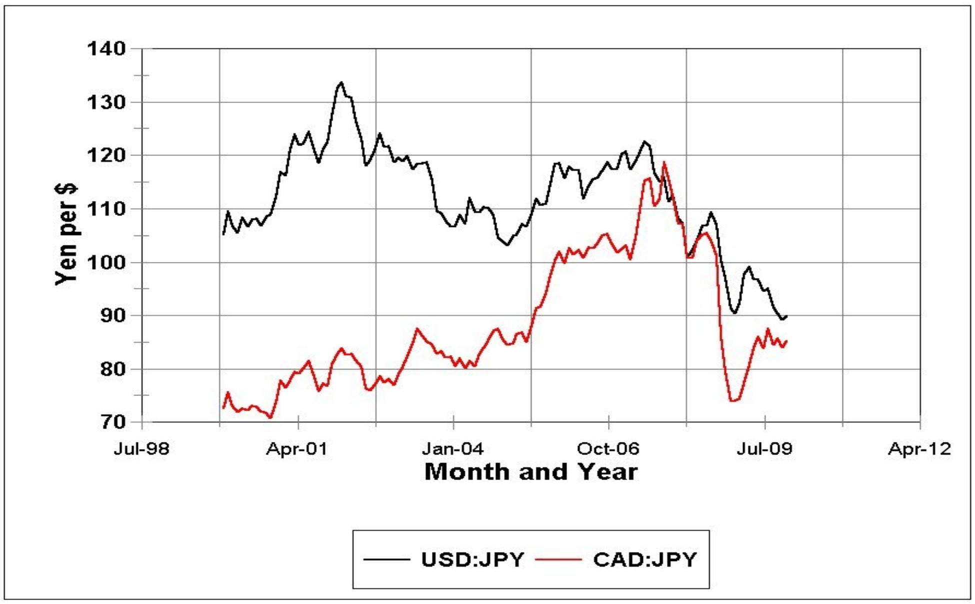

Figure 13: Monthly average exchange (interbank) rates since Jan. 1, 2000.

The GSU imported from both the east and west coasts is very similar to the uni from Japan, Russia and China. BC product is rated well on appearance and taste but the texture is often judged a bit soft in comparison to Boston product. There was no reason given for this although, because they are the same species (*S. droebachiensis*), it may have more to do with the differences in the intervals between harvest and processing. BC GSU is transported live to Japan where it is processed (24 - 36 hours post-harvest) while Maritimes GSU is processed in or around Boston (as little as 12-16 hours post-harvest). The Hokkaido processors apparently moderately over-pack the Canadian GSU to compensate. Another source has supported this claim with RSU that have water in them when they are delivered live to his restaurant. He feels the best use for these is in a pasta or some such complex composite dish, as opposed to simply serving the opened urchin with the uni exposed, as the uni is softer with more ‘drip’ that some diners find a bit offputting..

Getting back to Mr. Ogino and his take on recent market trends in Japan, he characterised demand as generally declining. This is especially apparent in stores as sales have declined by about 50% over the past 5 years. The reader might note that this contrasts diametrically with what was passed along at the other meetings which probably indicates differing levels of involvement by the different companies in the various retail sub-sectors. In any case they all claim that the majority of people's incomes are very stressed these days and many people are cutting out especially luxury items, like uni, as a result. The housing value collapse in the US triggered a credit crisis around the world and Japan, as a major exporting powerhouse of manufactured goods, has taken a large hit from the global downturn. Another factor not generally brought up is that same real estate trend is being magnified as Japan's population is now shrinking. This is apparently increasingly affecting the real estate market in Japan as an excess supply of homes and offices is holding and perhaps even forcing down prices.

Returning to the subject at hand, when it comes to restaurant sales of sushi, and uni in particular, demand is strong and rising in the conveyor belt type restaurants but these are especially price sensitive. Some of these restaurants do not vary the price on their selection- all plates are priced the same at perhaps ¥ 150 or ¥ 200, whereas others have the different patterns or colours which code for prices ranging between ¥125 - ¥ 450. Working back from the restaurants point of view, if they are using 3 pieces of uni in a piece of sushi they are selling for ¥ 200, they need a per piece price of about ¥ 35 to realize a profit. Accordingly, their price expectations for uni are generally somewhere in the neighbourhood of ¥ 300 - 450 per 100 g pack. Chile remains a major supplier of frozen product.

On discussing product preferences, the biggest demand for uni remains with restaurants and they generally do not want bulk packs, much preferring trays. B.C. Red Sea Urchin, and perhaps Green Sea Urchin, uni is used primarily in conveyor-type sushi restaurants. The largest single consumer is Shimonoseki in Yamaguchi Prefecture, which produces a well known brand of sea urchin. Another similar brand is Echizen uni from Fukui prefecture. They feel just about any uni is OK. In Fukuoka, 60 grams of Mexican uni sells for about ¥ 200 - 300 (¥ 3,300 - 5,000/kg). The quality of product from the US has improved over the past year, presumably because the economic troubles there have impacted the domestic markets and they are shipping more and higher grade material to Japan again.

Discussing quality elements, Mr. Ogino felt temperature is the most important. The bulk uni they get in arrives and is kept at between 0.0 and 0.5 °C and that will give it a shelf of about 15 days. Once it is displayed at a supermarket, the temperature generally ranges from about 8 - 10°C which reduces the shelf life to about 2 days., and sometimes even hits 15° C which reduces shelf life to a matter of hours. Mr. Ogino mentioned that Canadian RSU uni is sometimes too dry on the tray which reduces its shelf-life.

With regard to traceability, supermarkets and restaurants alike both need access to the information but again generally only for backtracking and dealing with problems. As with the other companies, passing along the full suite of information is not recommended. Here too, regulations were implemented about 5 years ago that mandate the application of a "Best Before Date" on every package. Some, and perhaps most, consumers rely now totally on the posted date and no longer use their own senses to judge for themselves.

One of the preferred sea urchin types in Japan is the Bafun urchin, *Hemicentrotus pulcherrimus.* The Japanese government has been altering habitat since the early 1900's all around Japan to make fishing grounds more productive for inshore species including sea urchins and have had hatchery programs to produce urchin seed since at least the early 1960's. Of late global warming is affecting some habitat changes in Japan's coastal fishing areas, shifting some distributions northwards, possibly changing algal growth and distribution patterns that are contributing to the production of smaller uni. Jelly fish invasions are also increasingly common on the SW coast.

3.1.5 Table Top Osaka

Many Canadian companies think Tokyo is Japan but that is not the case. There are many Small and Medium sized Enterprises (SMEs) in Kansai (Osaka) and Tokai (Nagoya) which are direct importers of food products and there are almost as many success stories on contracts signed between Japanese and Canadian companies from these regions as there are from Tokyo. The Canadian Consulate in Nagoya arranged and scheduled a Canadian Food Expo at the Ritz-Carlton hotel for the next day. The event was attended by about 20 companies exhibiting their wares from across Canada, Mr. Gerry Ritz, Canada's Minister of Agriculture, and Mr. George Groeneveld, provincial Minister of Agriculture and Rural Development from Alberta, as well as various members of their entourages. The group participated in a similar though somewhat larger event at the Canadian Embassy in Tokyo the previous day which was attended by several hundred Japanese buyers. They were scheduled to move on to South Korea the following day.

Figure 14: Minister Gerry Ritz at the Ritz in Osaka.

Mr. Krause attended the speeches and toured the displays in the afternoon. Meetings that had been arranged with Mr. Furuike of Seaborn Japan, apparently an internet-based food/meal purchase and delivery company with some facilities in Vancouver, and, more informally with Mr. Kaneko of Ocean Trading from Kyoto, did not come to pass.

Talking with some of the other delegates the subject of China came up. A number of agricultural product producers commented on how China is actually a very tough market that is strongly focussed on commodities and that a key goal must be to avoid getting that label there because it is so very difficult to shake off afterwards.

Figure 15: Tabletop event featuring Canadian foods at the Ritz in Osaka.

A supermarket tour the following day found 5 trays of uni at the Aeon Kohyo Supermarket in downtown Osaka. priced at ¥ 1,580 per 100 grams. These were the only trays spotted at any of the stores checked over the course of the trip. The quality looked not bad, pretty standard reddish hue, nice packing, a little bit melted perhaps but generally quite nice. The product looked like *S. intermedius* uni but language difficulties prevented confirmation of the source. The store also had small bottles of preserved uni.

The Japanese restaurant at the Ritz-Carlton served uni in typical small rolls at the hard to believe price of ¥ 2,300 for 2. These are generally intended to be eaten in one bite but were this time

Figure 16: Fresh uni rolls fully assembled showing firm cover layer.

disassembled layer by layer. Before and after shots are shown in the following figures. The top piece of uni looked typically high quality but had a fairly strong processed taste while two hidden layers underlying the top layer looked less appetizing but tasted much more natural. Again this could not be confirmed through discussion but it seemed that the top layer, probably picked off a good quality fresh tray, was intended to provide a visual confirmation of quality, while the underlying pieces could well have been frozen without being brined and intended to provide a positive taste component.

Figure 17: Partly disassembled uni rolls from the Ritz showing less firm underlying uni layers.

3.1.6 Kohyo Co. Ltd. (Mie)

Kohyo Co. Ltd (www.kohyoj.co.jp) is an international trading company with offices around the world that is centred in Mie about an hour southwest of Nagoya. Mr. Krause and Mr. Takashi Furukawa travelled to the Kohyo office to meet with Ms. Noriko Kataoka, Chief of the Air Cargo Division, and Mr. Takamichi Mori, Assistant Manager of the 1st import Division to explore possible opportunities. Kohyo has dealt with uni sourced from Boston, California and Chile in the past but the market for that particular product in Japan right now is so difficult, and so many urchin companies are going bankrupt, that they are, for now, not active in that particular line. They did mention that their Amsterdam office (Kohyo Holland) might be interested in some frozen product for the European market but that was about the only possible lead they could supply at this time. Even that sounded pretty nebulous.

Interestingly, it became apparent quite early in the meeting that Ms. Kataoka had researched the website. She mentioned that Canada's west coast urchin fisheries are actually very small and our ensuing discussion compared the 2% of biomass harvest rate in BC to the 25 - 40% rate seen in other fisheries, including California's, the implication being that both fisheries have considerable room to expand. Any effort to increase the exploitation rate at this point is likely to be very divisive and not worth the effort given the state of the market but we agreed that this will not likely remain the case for ever.

We also discussed the use of and need for traceability information. Their position basically mirrored that of the other companies as they do not pass it up to consumers. They do recognize the value of developing a storyline for the product, especially now that mobile phones are employing bar code reading technologies that will allow consumers to link directly to the website through their mobile by scanning a 3-D barcode right on the product. This is just catching on in Japan and they are still watching to see how it goes before they'll jump in.

Once we were done meeting they expressed their gratitude that we had touched base as they have had no previous contact with Canadian urchin producers. The company supplies sushi items to firms around the world, including China and Russia, and is interested in developing ties with a variety of suppliers as it sees the business growing substantially down the road.

3.2 Tokyo

Mr. Krause arrived at his hotel in Tokyo on Friday and headed off to Tsukiji the next morning at about 4:00 AM to catch the uni auction. There was lots of RSU product at the auction, way more than has been seen on any other trip to Japan. The US markets have taken a major tumble because of the recession and more product is going to Japan. On this visit, RSU comprised 13 out of a total of about 40 rows of uni displayed for auction, probably close to 25 - 30% of the product on offer this night.

There were a couple of people from Los Angeles also visiting that night. One of them presented his card, Mr. Taro John Ikeda from Showa Marine Cold Storage in LA. The other fellow did not have a business card but apparently has family active in Mexico's urchin fishery. According to him, most of the Mexican harvest is now processed in Mexico although the Mexican product at Tsukiji that night looked very bad. At any rate, they were just at the start of a 10 day trip to Japan which was going to include 3 days in Tokyo followed by a week or so down around Osaka and points south. They mentioned that Tsukiji is used by US processors to get around problems with money collection as the trading companies take care of payments from buyers so the US firms do not have to. This is apparently more of an issue when selling to a larger number of smaller enterprises, at least some of which are restaurants. By using the auction the trading houses take care of those particular problems so the auction is actually a pretty quick and easy solution. They were not however entirely convinced that the stated bid prices were always the same as the recorded prices. Still they have an agent in Tokyo who looks after their product at Tsukiji for them, (Takashi Akan- Buddy Trading Co. email: buddy @jcom.home.ne.jp) although it also sounds like a non-exclusive type arrangement. They like to come over and visit 2-3 times a year so it works out for everyone.

We spoke a bit about the market situation both in the US and as we saw it here on that night. For one thing, the bidding was kind of lack-lustre and bidders were leaving the auction by about half-way through so it seemed that the supply was exceeding demand and that it was likely that prices were going to be low as a result. Things get much more competitive in December- January and especially in August when there is a big festival that usually sees the high point for prices over the whole year. California has made a major effort to remain in the market all year round so they are not continually having to win back customers from other suppliers after they move over because of seasonal absences. That would seem to be a pertinent point for Canadian industry to consider especially as we seem to be missing out on one of the major market periods in August.

The observations taken at the auction were mated with the posted auction results from the internet the next morning. There was lots of very nice looking US product up but the highest posted price on the Maranaka site was only ¥ 3,500 for a 300 gram tray while the average was only ¥900. On the smaller 150 g and 80 g trays, the maximum and average prices were ¥ 1,500 and ¥1,000 and ¥ 300 and ¥ 250 respectively.

Much of the RSU product looked very nice, good colour and texture and some ‘neatness’ on the packing etc., but the large size of the skeins (in comparison to the smaller Japanese and GSU uni) just looked a bit awkward somehow (Figure 18). It was not just the more intricate packing patterns of the smaller uni, it was also that the appearance of the individual pieces was somehow more uniform in terms of the edge, texture/firmness and form. In contrast to more petite uni, the RSU look like veritable slabs, a realization that kind of drove home a point made somewhere by someone along the way on this tour that the size of the RSU skeins contributes to perceptions of how expensive it is. If you use 3-4 of the smaller skeins in a roll of some sort, collectively they probably still weight less than a single piece of RSU uni. Economizing is more obvious, if not more difficult, because it must necessarily involve cutting the skein into pieces. Given the importance of maintaining protocol on form in Japan’s cultural traditions, splitting or cutting the uni as an economizing measure would likely be frowned upon.

I have not, however, seen any research or opinion pieces that would necessarily discredit the sale of pre-trimmed pieces so that may remain an option worth exploring. A little bit of experimentation may be in order here as finding a way to cut the roe into uniform patterns prior to the brining step without causing excessive damage and leakage may well solve both these ‘problems’. It may be that the centre is best frozen pre-brining, thereby increasing recovery, while the edge is dedicated to the brine. Patterns could be designed to appeal as unique geometric forms and sizes that could in themselves be a differentiating factor. Maple leafs are one form that comes to mind, diamonds, octagons, hexagons, the possibilities are endless.

As mentioned, another difference is the uniformity of the apparent firmness. This is also related to the larger size but in this case might be quantifiable in terms of differences in the surface area: volume ratio and how the ‘depth’ of the uni changes as one moves towards the centre. The thickness will moderate the brining effects and larger uni need longer exposure to allow sufficient penetration of the brine, particularly in the middle of the skein. It is a balance as the edges can be over-exposed and too dried out.

The fellows from California also related how California is now down to maybe a dozen processors from maybe 28 - 30 a decade ago and how the State seems determined to wreck the remainder of the industry with its single-minded drive to expand the number and extent of

Figure 18: Examples of uni at Tsukiji on Nov. 14, 2009. Those above thick line are RSU from USA and Mexico while those below are small Japanese etc product examples.

Marine Protected Areas and promote the continuing expansion of the sea otter range. This is a battle that is far from over but reports suggest that the Governor's office and the California Department of Fish and game are unresponsive to the plight of the fisheries and have thus far managed to close off most of the Central California coast to commercial fishing.

Some might say this will open up market opportunities for BC urchins in the US but I believe this is short sighted. For one thing DFO is similarly inclined when it comes to the otters and the impacts on fisheries. I'd say we can pretty much bank on the success of that program in California further invigorating the environmental campaign here to restrict access by commercial fisheries. A better alternative to my mind is to work with the California industry to further develop a realistic vision whereby management develops the knowledge needed to optimize habitat and fisheries productivity so that humanity derives maximum sustainable benefit from the bio-resources available instead of just conceding them by default to the otters. In addition, I think over the medium to longer term the loss of the California industry as a very significant ally will handicap efforts to continue building a distinct market for a wild, high quality Red Sea Urchin products in the face of mounting competition from other sources, including wild and cultured Russian, Chilean, Chinese and Japanese product. On this I would again refer to the comment by Ocean Trading that effective branding requires a unique characteristic that can be used to distinguish the product from other similar products: the RSU from the West Coast of North America has that if only by virtue of it's large size in comparison to the other products. Translating this into a branded advantage will require concerted and coordinated collaborative efforts on the part of all producers to de-commodify the products from the industry.

On a tour of an Ito Yokado supermarket set in a suburban-like neighbourhood, filled with the sorts of everyday shoppers that would be seen in Canada, a fairly typical store was observed. It was smaller than the super-mall type store but seemed to have a range of selection and prices that would be unique to the neighbourhood but that, again, would not be particularly out of place in Canada. This store did not have any uni on display, reflecting, one assumes, a lack of demand from a public more focussed on life's necessities than on luxury treats.

Figure 19: A typical neighbourhood Ito Yokado supermarket in Tokyo

I looked for, but did not locate, a

conveyor-type sushi restaurant to try but did note that the only restaurants that were busy were those offering value priced meals. The more premium establishments had some customers but none of those seen over the weekend in Tokyo, or in Osaka over the previous 4 evenings for that matter, could be called busy. No restaurants were seen which identified themselves as users of BC uni or even of RSU or GSU product.

Dinner on the last night was sushi. Uni, at ¥ 420 per piece, was the most expensive item on the menu and, judging from its condition, they did not get a lot of call for it. The uni looked like the typical Japanese red uni (*S. intermedius*) but came out looking pretty much like mush without much in the way of firmness. Still the taste was fine but definitely processed (as opposed to frozen pre-brine). Kingcrab and abalone were priced at ¥ 400, spot prawns at ¥ 280 and most everything else at between ¥ 130 - 150.

A few final comments and observations from various discussions with Japanese families and folks met along the way. Japanese people, and perhaps Asians in general, often regard Canada as not just big but as vast and empty and therefore kind of intimidating. One young fellow I talked with, a high school teacher, felt many people there need lots of people around to feel comfortable and at ease because solitude in Japan is a luxury few ever experience or indeed desire. He and his young family love the idea of nature and feel a real need to preserve it, he teaches that in school as part of the curriculum and all his friends believe in it enthusiastically as well.

When it comes to identifying countries like Japan, South Korea is considered by many Japanese as virtually identical to Japan with people who share many customs, habits and beliefs. This suggests that Korea might also be hold potential as an alternative market target for uni.

4.0 Findings and Recommendations

Unfortunately the market for sea urchin products in Japan is flat and is likely to remain as such for the foreseeable future in part because of the economic and demographic challenges the country faces and in part because of the abundance of competing producers selling into that market. The sea urchin products market in Japan is essentially an extremely competitive commodities market within which the Red Sea Urchin operates at a disadvantage because the uni they produce is considerably larger than the historical preference of consumers in that country. There may be some experimental preparations that can developed and market tested but these will likely require substantial commitment and investment that would be hard to justify given current conditions and the risks involved.

Chinese consumers have a strong attraction to seafood and can be expected to increasingly influence seafood markets as rising disposable incomes in the country provide support for demand growth. Chinese consumers and chefs are still relatively inexperienced with sea urchin products at this point but similarities with the situation faced by other new products when they were first introduced are striking. Cold water prawns and lobsters from Canada were completely novel when first introduced but demand for them grew rapidly as consumers became more familiar with them and they are now very popular seafood items in China.

Seafood distributors in China are keen on increasing access to a larger range of seafoods for consumers and consumers are reportedly keen on tasting new foods from around the world. Sushi restaurants are amongst the best known and fastest growing food service categories in China. Partly as a result of this, Chinese consumers know sea urchins are a very highly regarded sushi item in Japan and comprise an attractive and tasty option. At the same time their quality criteria are more forgiving and one apparent factor in favour of the Red Sea Urchin is that large size pieces are preferred.

The very strict handling and temperature control requirements needed to preserve the quality of fresh processed sea urchin are probably beyond much of the Chinese distribution system at this point. They are however modernizing very rapidly and can be expected to quickly come up to speed as the need arises as long as they can see a profit in the business. Three to five years would seem to be a reasonable interval on which to base a strategy. The most appropriate distribution model initially would seem to be as frozen product as the allowances for and consequences of mistakes are less severe than for fresh product.

The Canadian production is currently so small as to be near insignificant. As the market for sea urchin products grows in China, Canada will very likely soon be left on the sidelines simply because we are handicapped and likely incapable of establishing a significant market presence under our current management restrictions. The most significant of these is the extremely low exploitation rate of 2% of harvestable biomass. Other jurisdictions have established environmentally and economically sustainable fisheries on Red Sea Urchins using exploitation rates closer to 30%.

Arguments in favour of at least initiating a program of experimental investigations into the environmental consequences of different exploitation rates are becoming ever more persuasive. Our increasing knowledge of the natural state of the Northeast Pacific near shore ecosystem, characterized by the presence of the sea otter and the severe impacts their presence has on the abundance of urchin and other invertebrates, is making it increasingly difficult to scientifically justify the 2% rate. An overabundance of urchins leads to readily apparent and deleterious environmental consequences as the urchins over-graze the kelp resources and basically decimate kelp canopy habitat needed by various life stages of any number of other ecologically and economically important species.

If experiments on the advantages of increasing the exploitation rate bear fruit, ramping up Canadian production by a factor of 5 - 10 times, or perhaps even more, is not inconceivable. This is very likely to take a considerable amount of time and building an increased freezing capacity would dovetail nicely with the introductory strategy recommended for building the Chinese market. In this way both producers and distributors similarly initially develop the frozen segment as an intermediate step to establishing the infrastructure and acumen to effectively deal with the increasing volume(s) of highly sensitive fresh product(s). This may prove temporary as the fresh market builds but it seems a sensible path to mitigate the risk of inconsistent sales in the interim.

China, much as Japan, is actually a very tough market with a strong focus on price competition for commodity products and considerable effort is warranted to avoid the associated pitfalls of being identified as such because of the difficulties of shedding the label afterwards. In general, products require a definitively unique characteristic which can be used to differentiate it from the larger commodities market. Red Sea Urchins are unique because of their large size in comparison to other sea urchin species, and therefore have easily distinguished features that can be used to differentiate products derived from them from other sea urchin products. The large size can also be expected to provide a competitive advantage in China if it is marketed properly.

Success in branding Red Sea Urchin products would permit the emergence of a more exclusive and much higher price range. Successful pursuit of this as a goal will benefit greatly from coordinated efforts by all producers of RSU products. This includes especially the major producing areas of BC and California but also includes Alaska, Washington and perhaps even Mexico once it is an established differentiated category.