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# A Brief Look at the Shellfish World in Chile

by: Dan Cheney, Pacific Shellfish Institute  
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Several months ago I was able to travel twice to Chile as the guest of the government to review progress being made on several large-scale ocean science and education projects and to present an overview of shellfish aquaculture research in the Pacific Northwest. I was supported by the Millennium Science Initiative, a national organization funding a wide range of large-scale basic and applied research projects, including shellfish aquaculture. You can view the scope of their funded studies at [http://www.iniciativamilenio.cl/en/home\\_en/](http://www.iniciativamilenio.cl/en/home_en/). Let me know if you'd like more details about these interesting projects.



*A Chilean oyster.*  
Photo credit: Dan Cheney

Shellfish aquaculture is mainly restricted to Chilean mussels and Peruvian calico scallops, with smaller amounts of native Chilean and Pacific oysters. The scale of mussel aquaculture is massive, greatly exceeding other countries and regions with the exception of China. The farm market value in 2017 was reported by the UNFAO at over \$2.5 billion! US mussel harvest in 2017 was valued at about \$10 million. The mussel industry in Chile generates 12,000 direct and 5,000 indirect jobs, with 619 companies, of which about 90% are small businesses.

Cultured and wild harvested shellfish and seaweeds account for a wide range of seafood and seafood products I saw while exploring fresh seafood markets in coastal towns. There I found whole scallops and scallop meats, whole and half-shell oysters, clams, several types of barnacles, Chilean abalone, squid, sea urchins, and dried kelp. Most shellfish were displayed fresh, some in ceviche and others smoked. The mixed shellfish products looked especially inviting, and were reasonably priced.



*Dr. Bernardo Broitman at a fish market.*  
Photo credit: Dan Cheney

My first trip to Chile, late last year, mainly focused on project reviews. I was able to briefly visit a grower in Colquimbo north of Santiago, where scallops are cultured in lantern nets hung beneath buoyed longlines. Scallop production is currently much reduced in Chile, so there are now relatively few growers. Remember the keynote speaker from the last PCSGA/NSA conference, Dr. Bernardo Broitman? He lived near this area and was my guide and host.

In early January I flew south to explore the northern Patagonia area of Chile with much needed assistance and translation support from Luis Oliva, Cristian Segura, Cristian Vargas and Bernardo (their contact information is listed below). My first stop was the port city of Puerto Montt, where I met Luis and his staff at CETMIS.

*Continued on next page...*

CETMIS offers instruction to small and medium sized growers in the latest farming methods and uses advanced methods such as epifluorescence microscopy to predict the timing and extent of mussel larvae production. The latter is especially important as the mussel farming industry currently depends exclusively on collectors to catch seed from the natural environment. Not surprising, environmental variations such as upwelling, HABs and sometimes volcanic activity, cause big fluctuations in seed production and growth.

My next stop was Chiloé Island with Luis as my guide. Chiloe Island is about half the length of Vancouver Island and has a highly irregular shoreline with numerous inlets and small offshore islets. Mussel buoys and fish farm rafts are present in about all protected areas on the east coast of the island. Mussel harvests in this region account for the bulk of the production in the country. I was told there are important cost advantages of producing in Chile given the rapid growth cycle. Harvest is within 9 to 12 months from seed.



*Rows of buoys at a mussel farm.  
Photo credit: Dan Cheney*

We had an opportunity for a short visit to a mussel farm owned by Justo García and an adjacent government shellfish experiment station. Justo farms mussels, as well as scallops, and native and Pacific oysters. We happily sampled all of these as well as “piure” which is a tunicate or sea squirt and a popular item in mixed seafood plates and chowders.



*St. Andrews Mussels processing plant.  
Photo credit: Dan Cheney*

My final stop on Chiloé was the St. Andrews Mussels processing plant. This was a very large, modern and highly mechanized operation which combines cleaning, selection, cooking, freezing, selection, packing, storage, and shipping on trucks to export terminals. We were given an up-close and personal tour of this amazing facility by the plant manager, Branco Papic. He asked us to fill out and sign a form indicating our contacts with other shellfish growing areas outside of Chile, and ensuring we had no food borne

illness. We then decked out in white galoshes, white lab coats, gloves, eye goggles, noise cancelling ear muffs, and masks, and then lead through the many phases of the process operation. Here thousands of tons of mussels are cooked, frozen, and shipped in bulk or in consumer ready packs to major export and domestic markets. Check it out at <http://en.standrews.cl/>

This interesting conclusion to my visit in Chile demonstrated the sophisticated scale of their aquaculture development and the coordination, such as the Millennium projects, between the public and private sectors. In future visits, I plan to set aside more personal time in the wild and historic areas of the country, and for travel to the Andes.

Contact Dan Cheney if you would like to learn more about his travels to Chile:  
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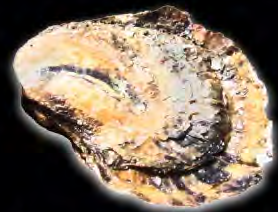


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