

## Sea cucumber products at the China Fisheries Seafood Expo 2014

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### Introduction

The China Fisheries Seafood Expo is Asia's largest seafood trade exposition. The 19<sup>th</sup> Expo was held in the Qingdao International Convention Center in November 2014, with a record number of 1,206 participating companies and approximately 27,490 visitors from over 114 countries. "A show such as this expo provides a chance for buyers, sellers and government officials to meet face-to-face, explore new opportunities and find solutions to existing challenges," said Peter Redmayne, president of Sea Fare Expositions.

About 67 finfish and 34 invertebrate species were exhibited, including sea cucumbers. China has traditionally sourced their sea cucumbers from countries in tropical waters such as the Philippines, Indonesia and Pacific island countries. With tropical sea cucumber resources declining from overfishing, temperate species from Canada, the United States of America, Europe and South America were being promoted at the Expo to attract Chinese buyers.

### Report

This contribution describes, with photos taken at the Expo, some of the products displayed — their common name, scientific name whenever possible, origin and price. It was difficult to get information from the traders, as they do not know much about the products offered for sale. Recent information on the fisheries and trade of sea cucumbers can be found in Lovatelli et al. (2004), Toral-Granda et al. (2008) and Purcell et al. (2012, 2014).

#### 1. South America

**Scientific name:** *Isostichopus fuscus*

**Common name:** Brown sea cucumber

**Dried** (if the order is more than 20 kg): RMB 1,440 kg<sup>-1</sup> (size not specified); CNY 1,440 or USD 234.72 kg<sup>-1</sup>

#### 2. South America

**Scientific name:** *Isostichopus badionotus*

**Common name:** Three-rowed sea cucumber

**Dried** (if the order is more than 20 kg): CNY 1,100 kg<sup>-1</sup> or USD 179.3 kg<sup>-1</sup>

#### 3. Canada and USA

**Scientific name:** *Parastichopus californicus*

**Common name:** Red sea cucumber

**Dried** (if the order is more than 20 kg): CNY 1,600 kg<sup>-1</sup> or USD 260.8 kg<sup>-1</sup>

The red sea cucumber from British Columbia, Canada and the USA is a unique species consisting of two parts: a firm outer skin and a thick inner muscle, often referred to as the sea cucumber meat. They are sometimes called "big" or "giant red sea cucumbers" and are usually reddish or dark brown. They are found along the entire length of the British Columbia coast and the average commercially harvested length is 30–40 cm. The skin is highly sought after for its health benefits. The meat, or muscle, has great nutritional value and is used in a variety of very tasty dishes. British Columbia is known around the world for clean, pristine waters and it is in these conditions that experienced divers hand-pick the sea cucumbers. They are sent to the surface and immediately sliced, drained and stored for delivery to a dock and then sent on to a registered processing plant. At the dock the third party monitor weighs the product and deducts its total from the individual quota, thus insuring no over fishing in any given area. At the processing plant, the muscle is removed from the skin, vacuum packed and frozen, while the skin is cooked and packed for shipment. Each step of the process is carefully monitored and controlled to ensure that the highest regulatory standards are met. Red sea cucumbers are harvested between October and April. Products

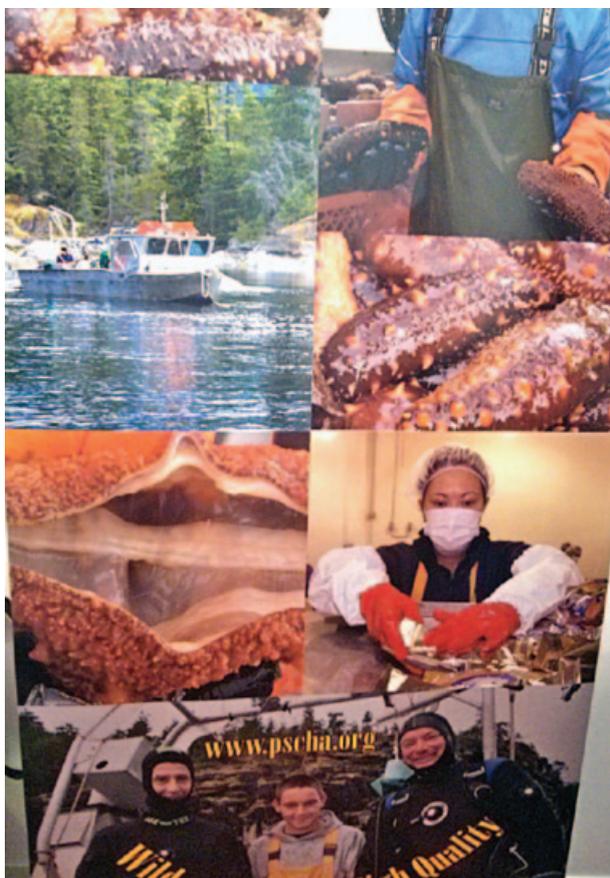
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are sold dried, as half-dry skin, cooked, salted and frozen (Fig. 1). (Source: Pacific Sea Cucumbers Harvesters Association website, [www.pscha.org](http://www.pscha.org))



**Figure 1.** Poster showing the giant red sea cucumber (Photo taken at the booth of the Pacific Sea Cucumber Harvesters Association in the Seafood Expo, Qingdao 2014).

#### 4. South Korea

**Scientific name:** *Apostichopus japonicus*

**Common name:** Japanese spiky sea cucumber

**Ready to eat:** CNY 1,680 kg<sup>-1</sup> or USD 273.84 kg<sup>-1</sup>

**Dried:** CNY 1,998 kg<sup>-1</sup> or USD 325.67 kg<sup>-1</sup>

Various value added products, such as instant sea cucumber (ready to eat from the package); solar salt with dried sea cucumber extract, and soap with sea cucumber extracts claimed to prevent ageing and help skin regeneration, were promoted in the Seafood Expo (Fig. 2). For the dried form, the Haeser company claimed that they are marketing wild sea cucumber caught from clean waters and it is the only Korean company to produce a saltless dried sea cucumber with a patented technology. Haeser Products Co., which was established in 2011, has its base in Busan.



**Figure 2.** Various sea cucumber products from *Apostichopus japonicus*, including solar salt (A), soap (B), ready-to-eat sea cucumber (C), and beche-de-mer (D).

#### 5. Canada

**Scientific name:** *Cucumaria frondosa*

**Common name:** Orange footed sea cucumber

**Frozen:** USD 3 lb<sup>-1</sup>

**Ready to eat:** CNY 1,400 kg<sup>-1</sup> or USD 228.20 kg<sup>-1</sup>

This sea cucumber is wild, captured in the North Atlantic Ocean off Canadian shores. They are found at approximately 10 m under water and where the maximum water surface temperature does not exceed 14°C. They are harvested from waters that are far from industrial plants and free from anthropogenic activities. After the anterior and posterior parts and internal organs are removed, they are baked without the use of preservatives, colouring agents or gelatine. This kind of processing results in irregularly shaped sea cucumbers with a “degreeten” dryness that could be kept longer. Products are sold as dry skin without or with meat (Fig. 3). (Rosalynd United Trans Limited, website: [www.unit-edtrans.ca](http://www.unit-edtrans.ca))



**Figure 3.** *Cucumaria frondosa*. A) Dried skin; B) Whole dried product.

## 6. Caribbean

**Scientific name:** *Holothuria mexicana* (Fig. 4)

**Common name:** Caribbean beche-de-mer

**Dried with skin:** USD 53 kg<sup>-1</sup>

**Dried without skin:** USD 70 kg<sup>-1</sup>



Figure 4. Caribbean beche-de-mer, *Holothuria Mexicana*.

## 7. Europe

**Scientific name:** *Holothuria tubulosa*

**Common name:** Tubular sea cucumber

**Dried:** CNY 1,360 kg<sup>-1</sup> or USD 221.68 kg<sup>-1</sup> — selling like hotcakes in the China Seafood Expo

The products from one stall came from Italy and those from another stall came from Greece.

## 8. Red Sea

**Scientific name:** *Holothuria scabra*

**Common name:** Sandfish

The National Aquaculture Group of Saudi Arabia is a fully integrated company with feed mills, hatcheries, and grow-out and processing facilities. The grow-out process takes place naturally in the pristine waters of the Red Sea. After harvesting, the sea cucumbers are quickly transported to the processing plants. The sandfish is grown in low-density concentration ponds with full traceability and high biosecurity standards.

## 9. Products from China

**Scientific name:** *Apostichopus japonicus* (Fig. 5)

**Common name:** Japanese spiky sea cucumber

**Dried:** Price range from CNY 700–8,000 per 500 g or USD 114.1–1,304 per 500 g

## Discussion

This brief overview reveals an increased awareness of certified hygienic and nutritional products, with an emphasis on food safety and sustainability in the sea cucumber fishery. Products from North America and Canada stressed the pristine conditions from where the sea cucumbers are fished, while those from China and South Korea implied that wild captured products are more nutritional than cultured ones, which may be subjected to the use of non-approved chemicals. Sustainability is also highlighted, e.g. by the Pacific Sea Cucumber Harvesters Association (PSCCHA) of British Columbia.



Figure 5. Dried beche-de-mer prepared from *Apostichopus japonicus* from Dalian and Qingdao in China showing products of different value according to whether they are wild caught (with higher value) or cultivated, and of different sizes. Prices shown are per 500 g.

The traditional sea cucumber trade from tropical countries will, therefore, have some catching up to do to ensure that they also emphasise clean, wholesome products that are harvested sustainably. The tropical sea cucumber producers could also add value to their products by looking into a wider array of processed products and not just depending on the traditional beche-de-mer.

A recent paper by Purcell (2014) was based on direct observations of exported products from Pacific Islands and Chinese markets in Hong Kong (five stores) and Guangzhou (11 stores); it shows that there is a good acceptance for these products, which have been produced and imported for a long time. Another contribution (Conand, this issue) also shows direct observations of the products from other markets (USA, North Korea, South Korea). It appears more difficult to confirm the species originating from the other countries, despite recent information and photos provided in the book published by FAO (Purcell et al. 2012). There is a need for further studies in order to get more precise data on the countries and ocean of origin of the products found in the Chinese markets.

The 20<sup>th</sup> China Fisheries and Seafood Expo will be held on 4–6 November 2015; it will be in the beautiful Qingdao International Exhibition Centre. The Seafood Fare China is already advertising for next year's fare: <http://www.chinaseafoodexpo.com/>

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