Trade of the humphead wrasse
(*Cheilinus undulatus*) in mainland China

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Survey period: Jan-Feb 2013
Method: visits to wholesale markets, wet markets, seafood restaurants, grow-out cages, landing ports

Survey cities
- Guangdong (Guangzhou, Shenzhen)
- Hainan (Haikou, Sanya, and also Tangmen and Lingshui, eastern coast between Haikou and Sanya)
- Fujian (Xiamen, Fuzhou, Ningde)
- Beijing
- Shanghai
Results
Guangdong Province

- Guangzhou (13-15 Jan, 2013)

- General information
  - Visited Huangsha Wholesale Market
  - No HHW found
  - Many tanks were empty
Guangzhou (13-15 Jan, 2013)
Guangdong Province

✓ Guangzhou (29-31 Jan, 2013)

✓ General information
  - Visited Huangsha Wholesale Market
  - HHW found in two shops, Jin-Yun and Yu-Feng
  - Average 1200 RMB yuan/kg for live HHW
  - Staffs mentioned all HHW came from Indonesia
Shop Jin-Yun (金运)

- Shop Jin-Yun has identified to be the main HHW trade shop in previous surveys (Note: A chain shop found in Shenzhen Yantian Wholesale Market)
- Totally 14 HHW in tanks
- 30-40 cm TL
- Message from staff: each time 20-25 HHW arrive, up to 3-4 times each month
- Estimated annual trade volume based on information above: 720-1200 HHW/year/shop
Shop Yu-Feng (裕丰)

- Totally 45 HHW in tanks
- 30-60 cm TL
- Message from staff: 3-4 times each month
- Estimated annual trade volume based on information above: 1620-2160 HHW/year/shop
Guangdong

Shenzhen (31 Jan-2 Feb, 2013)

General information

- Visited Yantian Wholesale Market
- HHW found in one shop, Qing-Shan (Note: no HHW in its chain shop in Guangzhou Huangsha Wholesale Market on 29-31 Jan survey)
- No HHW found in Jin-Yun (Note: found 14 HHW in its chain shop in Guangzhou Huangsha Wholesale Market on 29-31 Jan survey)
- 1400 RMB yuan/kg for live HHW, 450 RMB yuan/kg for dead HHW
- HHW imported from Indonesia and SE Asia
• HHW to Guangzhou mainly by truck, or to other cities (e.g. Shanghai and Beijing) by air
• Each shop in Yantian Wholesale Market has many big tanks for holding large amount of groupers
• No HHW found in display tanks of nearby Shenzhen Yantian Seafood Restaurant Street
• Totally 40 HHW in tanks, new arrival
• 30-50 cm TL
• 3-4 times each month
• Estimated annual trade volume: 1440-1920 HHW/year/shop
• Photos on HHW not allowed (above right: took from iPhone with poor quality). Allowed to take some photos on other reef fishes after showed my XMU name card
Conclusions from Guangdong Province

- Three main HHW trade companies were identified, Jin-Yun, Qing-Shan and Yu-Feng

- Shops in Shenzhen Yantian likely function as fish holding places for new arrivals prior to Guangzhou and other cities

- HHW traded mainly 30-60 cm TL

- 3-4 times each month each shop. Estimated the total annual trade volume from the three shop were 3780-5280 HHW/year

- HHW mainly come from Indonesia and other SE Asian countries by air
Hainan

- Haikou (3-4 Feb, 2013)

General information

- Visited Xiuying Port Market, Dongmen Wholesale Market, seafood restaurants
- No HHW found
Hainan

Tanmen (4-5 Feb, 2013)

General information

- A traditional village fishing in Nansha and Xisha waters for reef fishes and invertebrates
- Between Haikou and Sanya
Holding cages

- Visited holding cages of a main trader
- No good photos taken, because fishes stayed at bottom
Holding cages (Conti.)

- About 25 HHW found in cages, all caught from Nansha and Xisha
- In general, not many HHW caught in Nansha and Xisha
- The 25 HHW have been accumulated for a few months (e.g. total 46 ships, 64 trips to Nansha from 16 Oct 2012 to 22 Jan 2013)
- HHW mainly sold to Sanya and other cities (e.g. Haikou and Guangzhou)
- 500-1000 g BW/individual, 30-40 cm TL
- 1400 RMB yuan/kg for live HHW of 500-1000 g
- 700 RMB yuan/kg for live HHW of <500 g
Hainan

✓ Lingshui (6 & 16 Feb, 2013)

✓ General information

  • Lingshui is a traditional fishing village near Sanya; also a core area for domestic ornamental marine fish trade and marine fish culture
  • HHW was caught occasionally in local waters; however no more in the past 5-6 years
  • A national HHW breeding project has been conducted; broodstocks also kept in Lingshui
Holding cages

- Visited holding cages of two traders
- Two HHW found in a cage of one trader, caught locally 6-7 years ago
- HHW not for sale
Holding cages (Conti.)

• 50-60 HHW found in cages of another trader; have been kept for several years, 500-1500 g/fish. These HHW not for sale; kept as broodstock source for breeding in the future

• Trade for HHW and groupers mainly to Hong Kong

• HHW trade size: 350-1500 g/fish, 15-50 cm TL
Hainan

✓ Sanya (6-7 Feb, 17 2013)
✓ General information
  • Visited the First Agricultural Trade Market and Sanya fishing landing port
Live HHW found in four shops, A-Lan, Chang-Ji, Ke-Ji and San-Mei, and dead HHW in four stalls of the First Agricultural Trade Market.

- 1360-1400 RMB yuan/kg for live HHW.
- HHW imported mainly from Malaysia, Tanmen (see above), local fishing landing port.
- HHW sold locally, or to Guangzhou, Xiamen, Shanghai, etc.
- No HHW found in local fishing landing port.
Shop A-Lan

- Totally 26 HHW in tanks on the survey on 6 Feb 2013
- 30-40 cm TL
- Each time 25-30 HHW arrive, up to 3-4 times each month
- Estimated annual trade volume: 900-1440 HHW/year/shop
- No HHW on the survey on 17 Feb 2013
Shop Chang-Ji

- Totally 19 HHW in tanks, new arrival on the survey on 6 Feb 2013
- 30-35 cm TL
- Each time 20-25 HHW arrive, up to 3-4 times each month
- Estimated annual trade volume: 720-1200 HHW/year/shop
• 6 HHW found (assumed these are the remaining from the 19 HHW observed on 6 Feb 2013)
Shop Ke-Ji

- Totally 20 HHW in tanks on the survey on 6 Feb 2013
- 30-45 cm TL
- Each time 20-25 HHW arrive, up to 3-4 times each month
- Estimated annual trade volume: 720-1200 HHW/year/shop
- No HHW on the survey on 17 Feb 2013
Shop San-Mei

- Just sold out 15-20 HHW on the survey on 6 Feb 2013
- Each time 20-25 HHW arrive, up to 3-4 times each month
- Estimated annual trade volume: 720-1200 HHW/year/shop
- No HHW on the survey on 17 Feb 2013
• Totally 15 dead HHW found in four stalls of the First Agricultural Trade Market on the survey on 6 Feb 2013
• 350-700 g/individual, 25-30 cm TL, 400-660 RMB yuan/kg
• Each time 200 HHW arrive and stock in freezer, up to 6-8 times each year
• Estimated annual trade volume: 1200-1600 HHW
• Dead HHW maybe from local fishing landing port
Totally 10 dead HHW found in one stall of the First Agricultural Trade Market on the survey on 17 Feb 2013

350-700 g/individual, 25-30 cm TL, 360 RMB yuan/kg
Conclusions from Hainan Province

- Sanya and Tanmen are the main HHW trade centers
- HHW caught from South China Sea (in Tanmen) and also imported from Malaysia (in Sanya)
- HHW traded mainly 25-45 cm TL, both live and dead
- 3-4 times each month each shop. Estimated the total annual trade volume in Sanya First Agricultural Trade Market were 4260-6640 HHW/year (both live and dead)
- HHW sold locally or to other cities (e.g. Guangzhou, Xiamen and Shanghai) by air
Fujian

✓ Fuzhou (9-11 Feb, 2013)

✓ General information
  • Visited seafood whole sale market and restaurants (market closed for a week during Chinese New Year)
  • No HHW found
Fujian

• Ningde (near Fuzhou) (14-15 March, 18-20 April, 2012)

General information

• Visited local wet markets
• Dead HHW found, 25-30 cm TL
• 200 yuan/kg for dead HHW
• HHW came from Fuzhou
Fujian

Xiamen (August 2012-February 2013)

General information

- Various visits to Zhongpu Wholesale Market
- Live HHW occasionally found
Identified only one shop (Xing-Hui) for live HHW trade
1-2 HHW found each visit (more than one month between two visits)
1200-1300 yuan/kg for live HHW
HHW 30-40 cm TL
(Conti.)

- Found Shop Jin-Yun in Zhongpu Wholesale Market, Xiamen; its chain shops found in Guangzhou, Shenzhen, Beijing
- No HHW trade found
- Only have coral trout and mouse grouper
Beijing (9, 18 & 20 Feb, 2013)

General information

- Visited one seafood restaurant and Jingshen Seafood Wholesale Market (the biggest wholesale market in Beijing)
Seafood Restaurant

• Visited one seafood restaurant
• Did not keep HHW unless demand (from Jingshen Seafood Wholesale Market)
• Live HHW price: 2360 yuan/kg (wholesale), 3000 yuan/kg (restaurant)
• Size: 1250-1500 g/individual, up to 60 cm TL
• HHW imported from Indonesia and the Philippines
• Heard good seafood restaurants in Beijing sold maximum 4-5 HHW/day
Jingshen Seafood Wholesale Market

- Found four shops sold HHW
- Photos on HHW not allowed in all shops
- HHW came from Indonesia directly or via Shenzhen

<table>
<thead>
<tr>
<th></th>
<th>Shop A</th>
<th>Shop B</th>
<th>Shop C</th>
<th>Shop D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of HHW</td>
<td>2 HHW in tank</td>
<td>Number unknown</td>
<td>9 HHW in tanks</td>
<td>No HHW in winter</td>
</tr>
<tr>
<td>Price (yuan/kg)</td>
<td>-</td>
<td>1600-1800 for fish ~500 g; 2000 for bigger</td>
<td>1700 for fish 500-800 g; ~1500 for bigger</td>
<td>1500 for fish ~500 g; 1300 for bigger HHW ~1kg (Last year’s)</td>
</tr>
<tr>
<td>Size</td>
<td>45 &amp; 55 cm TL</td>
<td>500-1000g BW</td>
<td>45-55 cm TL</td>
<td>~500g BW</td>
</tr>
<tr>
<td>Demand</td>
<td>-</td>
<td>fluctuation</td>
<td>2-3 HHW/d average, max 7-8 HHW/d</td>
<td>Fairly good in the past; hard to say for this year</td>
</tr>
</tbody>
</table>
Shop A (嘉誉诚信冻品行)

Shop C (Jin-Yun, 金运)

Shop D (鹭发)

- No HHW trade in winter
- HHW from Indonesia directly

- A well-known shop for HHW trade in Jingshen Seafood Wholesale Market
- Chain shops also found in Guangzhou and Shenzhen
- HHW from Indonesia via Shenzhen
Shanghai (8 Feb, 2013)

✓ General information
  • Visited Tongchuan Wholesale Market
  • HHW 1300-1400 RMB yuan/kg
  • No HHW trade in winter
  • HHW imported