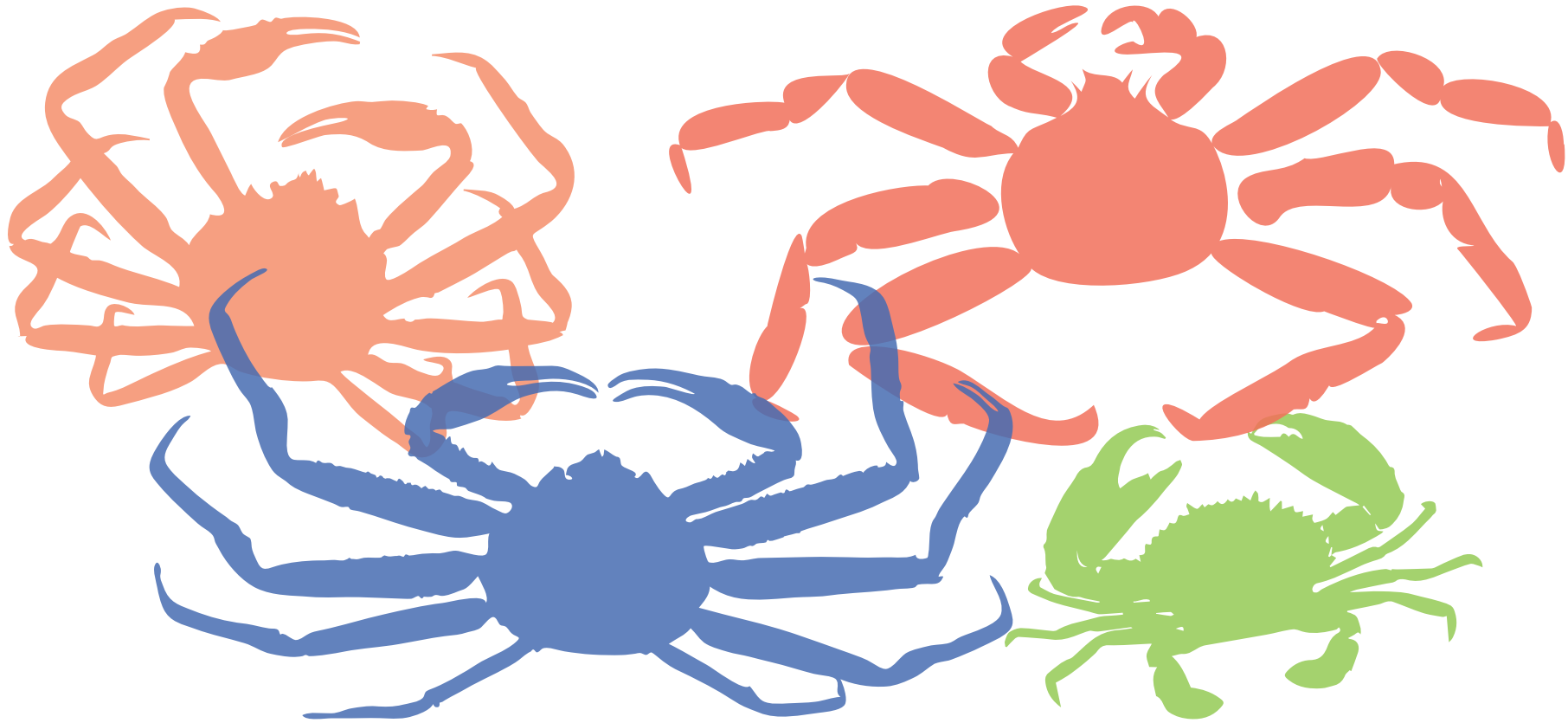


Processors Guide

Crab Species Identification in Alaska Fisheries



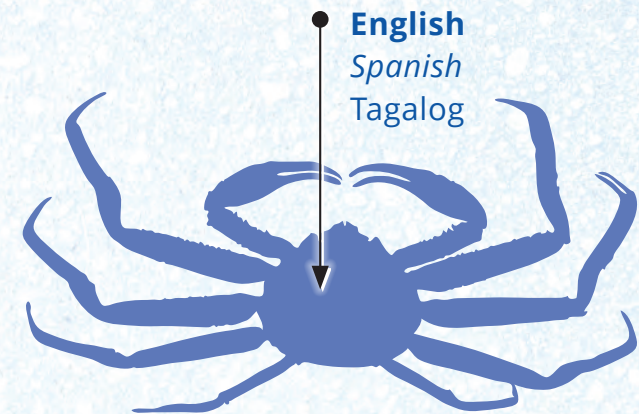
W.E. Donaldson

NMFS Kodiak

Introduction

The purpose of this document is to provide those working in the Alaska seafood industry an easy to use crab identification guide. Species are depicted with key characteristics that can be used for visual identification.

ID characters are labeled in **English**, *Spanish*, and Tagalog. Scientific and accepted common names are from American Fisheries Society Special Publication 31, 2005. Exceptions are *Paralomis sp.* which do not have accepted common names listed. Therefore, common names for *Paralomis* are from scientific literature. Accepted common names should be adhered to in order not to confuse species ID's. As an example, the name **brown** is incorrectly used to describe *Lithodes aquispinus* or **golden** king crab. Brown is the accepted common name for *Lithodes brevipes* not usually encountered in Alaska fisheries. Snow crab is the correct common name for *Chionoecetes opilio* and not for *C. bairdi* which is Southern Tanner crab. This is a bit confusing as there is no Northern Tanner crab. Also, the 'T' in Tanner is always capitalized and named after Lt. Commander Z.L. Tanner, commander of the Bureau of Commercial Fisheries steamer *Albatross*, whose explorations produced the early Pacific records of this genus.



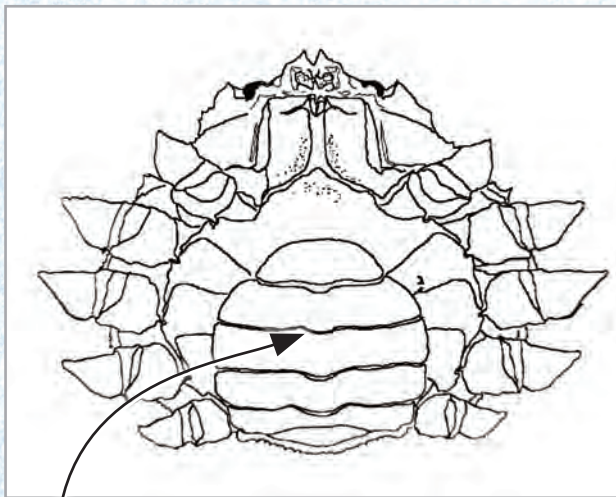
000 Common Name

ADF&G species codes are included. "Gulf of Alaska" is abbreviated to GOA throughout. The guide is divided into 3 sections: 1) King crabs, 2) Tanner and Snow crabs, and 3) Additional crab species. Distribution and depth are provided by species when known with some accuracy. These data are locations and depths where species have been found, not necessarily their limits of distribution and depth.

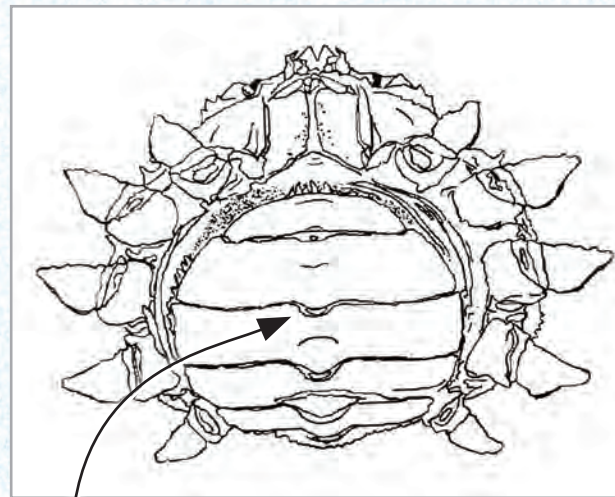
Acknowledgements

The following people contributed this guide: Paul Irvin for overall graphic design and composition. Translations provided by various Kodiak seafood workers. The green crab back cover is provided by the ADF&G Invasive species office. ADF&G Dutch Harbor provided photos of *Chionoecetes*, *Paralomis* and *Erimacrus* species.

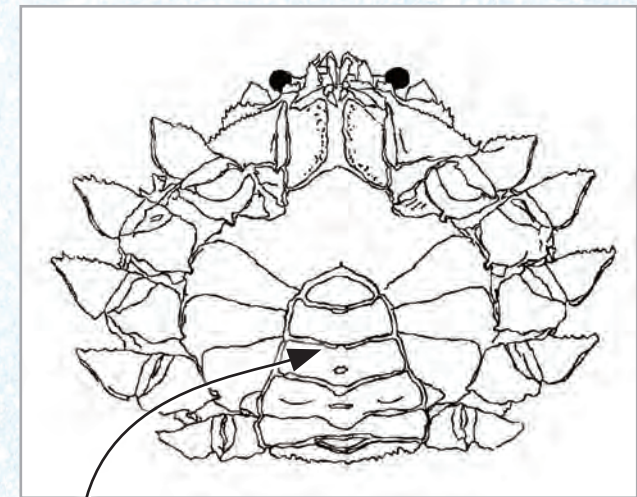
Crabs are Decapod (10 legs) crustaceans. The first two are claws or chelae and are not used for walking. Most crabs walk sideways. The claws are used for feeding, sexual displays and defense. Crabs are covered in a thick exoskeleton composed of chitin. Sexually mature males generally have large claws compared to females and a triangular abdomen compared to a females broader, rounded abdomen. Females use the larger rounded abdomen to carry developing eggs. In order to grow, crabs shed the their exoskeleton (molt) and form a new larger one.



● **Juvenile** female Tanner abdomen



● **Mature** female Tanner abdomen



● **Juvenile** and mature male Tanner abdomen

CONTENTS



Red King Crab
(*Paralithodes camtschaticus*) 1



Blue King Crab
(*Paralithodes platypus*) 2



Golden King Crab
(*Lithodes aequispinus*) 3



Scarlet King Crab
(*Lithodes couesi*) 4



Comparison of color and mid-dorsal spine patterns for king crabs..... 5



Southern Tanner Crab
(*Chionoecetes bairdi*) 6



Snow Crab
(*Chionoecetes opilio*)..... 7



Triangle Tanner Crab
(*Chionoecetes angulatus*)..... 8



Grooved Tanner Crab
(*Chionoecetes tanneri*) 9



Comparison of *Chionoecetes angulatus* (top) and *C. tanneri* 10



Dungeness Crab
(*Cancer magister*) 11



Red Vermillion Crab
(*Paralomis verrilli*)..... 12

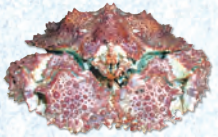
CONTENTS



Anomuran King Crab
(*Paralomis multispina*)..... 13



Hair Crab
(*Erimacrus isenbeckii*)..... 14



Brown Box Crab
(*Lopholithodes foraminatus*)..... 15



Decorator Crab
(*Oregonia gracilus*) 16



Hermit Crab
(Family Paguridae) 16



Spiny Lithode Crab
(*Acantholithodes hispidus*) 16



Pacific Lyre Crab
(*Hyas lyratus*) 16



Rhincerosus Crab
(*Rhinolithodes wosnessenskii*)..... 17



Scaled Crab
(*Placetron wosnessenskii*) 17



Helmet Crab
(*Telmessus cheiragonus*) 17



Soft Crab
(*Haplogaster grebnitzki*)..... 17

Additional Photos of Interest..... 18



921

Red King Crab *(Paralithodes camtschaticus)*

Distribution: Bering Sea, Aleutian Islands, GOA. Intertidal to 500 meters.

Red to reddish-purple

Roja purpura rojizo

Pula hanggang mapula-pula



- **3 pairs of spines**
3 pares de espinas
3 pares ng mga spine

922

Blue King Crab *(Paralithodes platypus)*

Distribution: Discrete populations exist at Pribilof, St. Matthew, St. Lawrence, King, and Nunivak Islands, Herendeen Bay on Alaska Peninsula, Olga Bay-Kodiak Is., Port Wells-PWS, Russel Fjord, Glacier Bay, Lynn Canal, Endicott Arm in Southeast Alaska. Shallow waters to less than 200 meters.

Blueish coloration

Coloracion azulada

Kulay asul



● **2 pairs of spines**

2 pares de espinas

2 pares ng mga

923

Golden King Crab

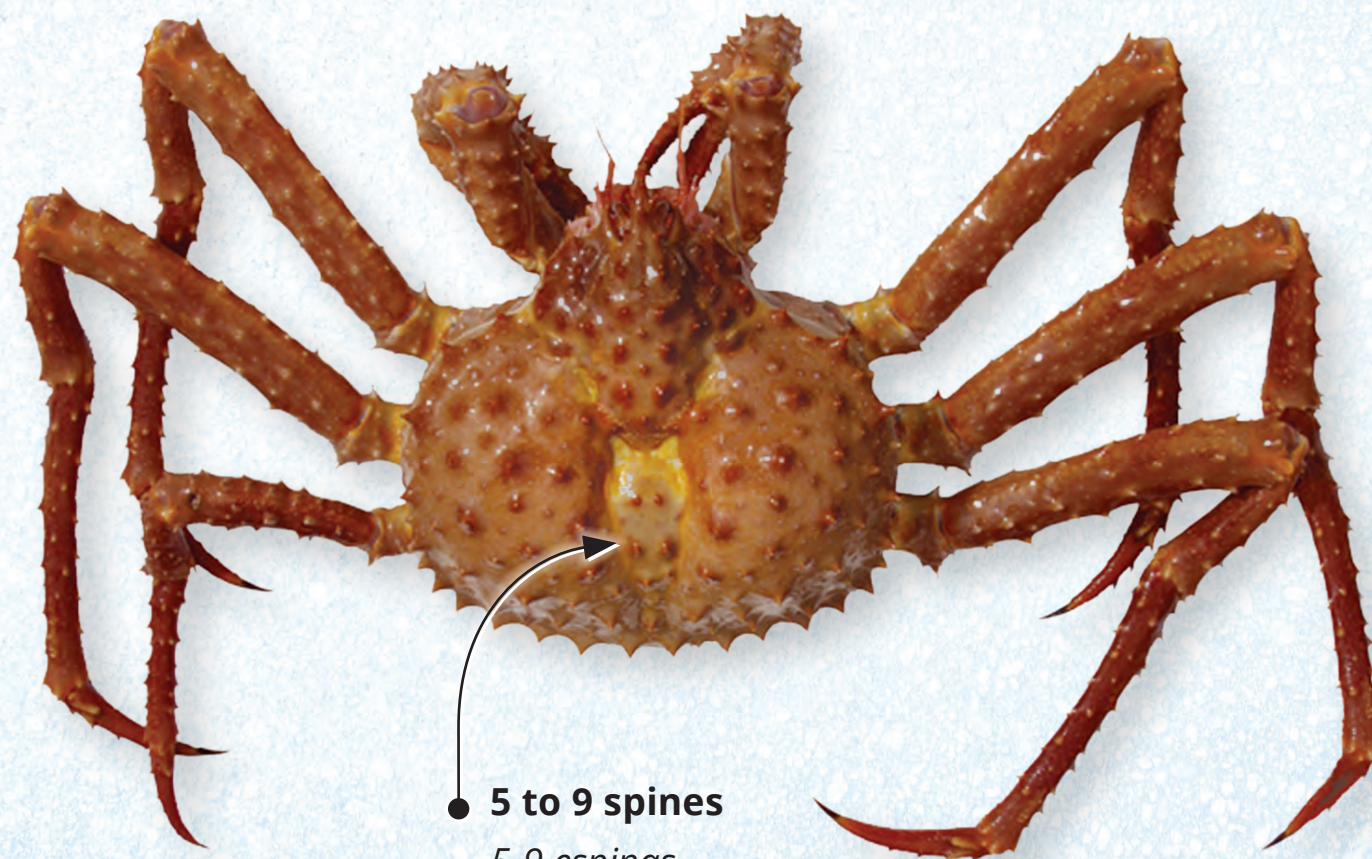
(Lithodes aequispinus)

Distribution: Bering Sea, Aleutians, GOA. 50 to 900 meters.

Golden-brown coloration

Coloracion dorada

Kulay uinintuang



● **5 to 9 spines**

5-9 espinas

5-9 mga tinik

924

Scarlet King Crab *(Lithodes couesi)*

Distribution: North Pacific: Bering Sea, Shumagin Islands, Seamounts in GOA. 200 to 1600 meters.

Scarlet coloration

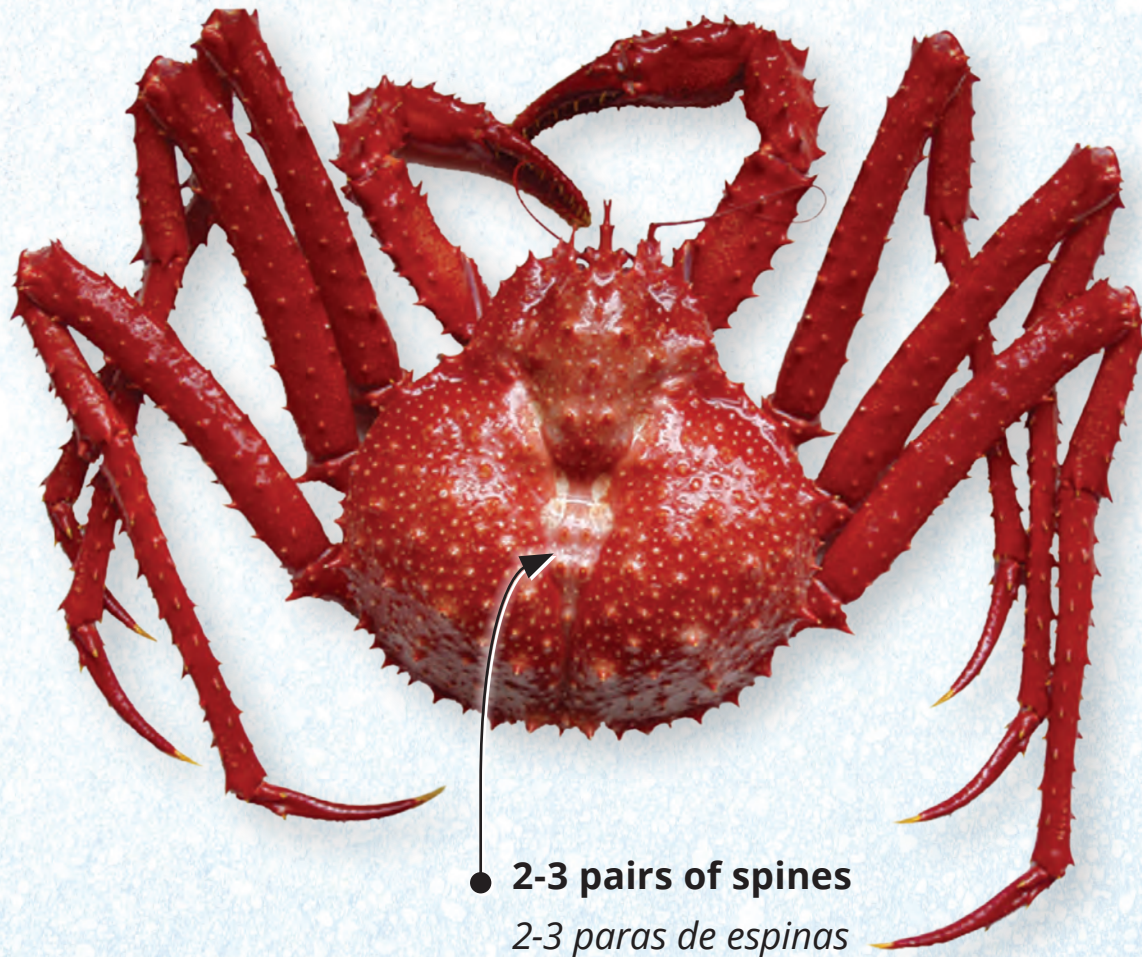
Coloration escarlata

Kulay iskalata

Long thin legs

Plernas largas y delgadas

Mahabang payat na binti



● **2-3 pairs of spines**

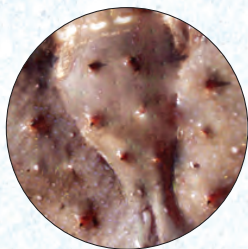
2-3 paras de espinas

2-3 pares ng mga spine

Comparison of color and mid-dorsal spine patterns for king crabs

Red king crab

6 prominent spines



Blue king crab

4 prominent spines



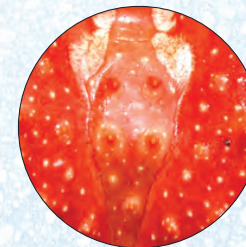
Golden king crab

5-9 prominent spines



Scarlet king crab

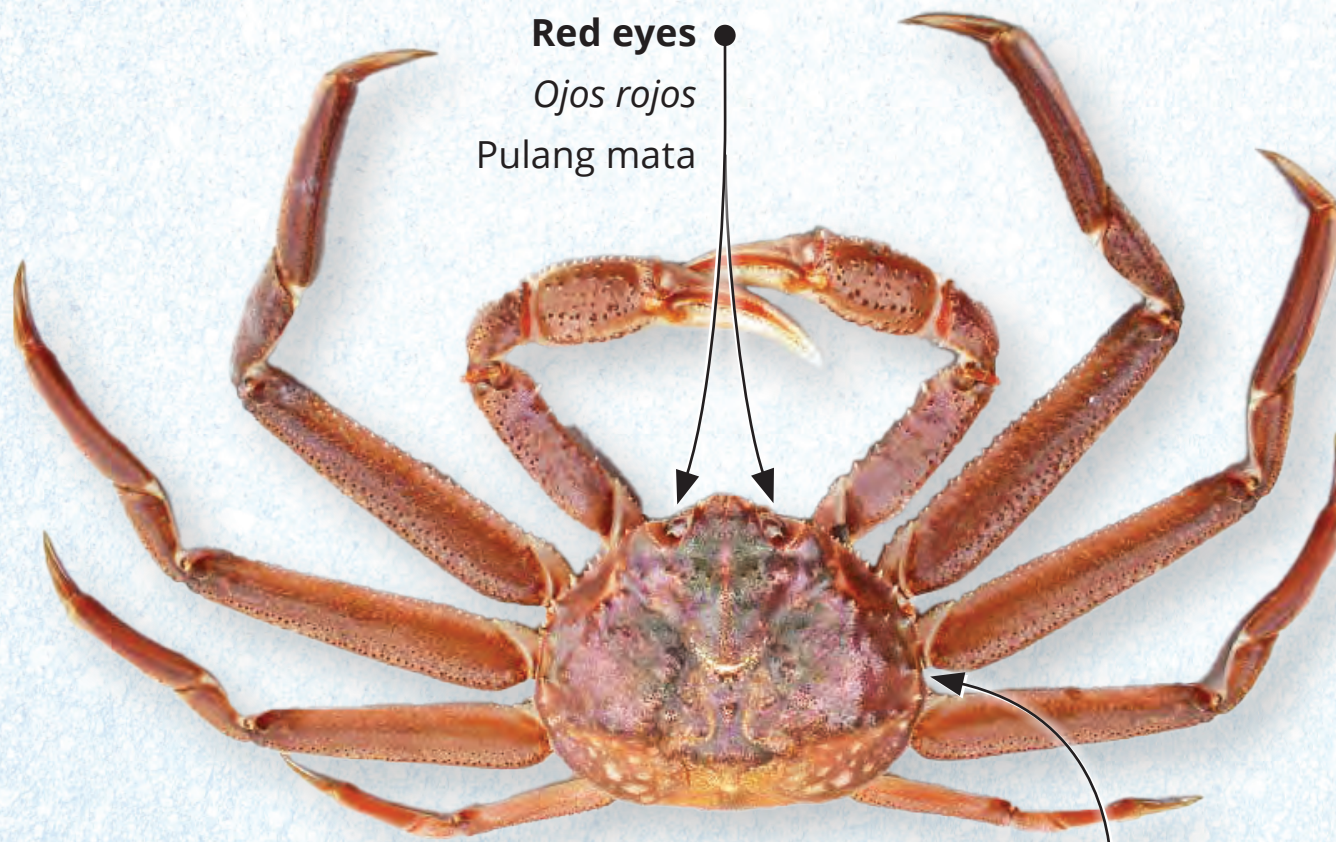
4-6 prominent spines



931

Southern Tanner Crab *(Chionoecetes bairdi)*

Distribution: North Pacific Ocean from Southeast Alaska, GOA, Bering Sea and adjacent to Aleutian Islands. Subtidal to 437 meters.



Red eyes
Ojos rojos
Pulang mata

Deep scalloping
Festoneado profundo
Malalim na scalloping

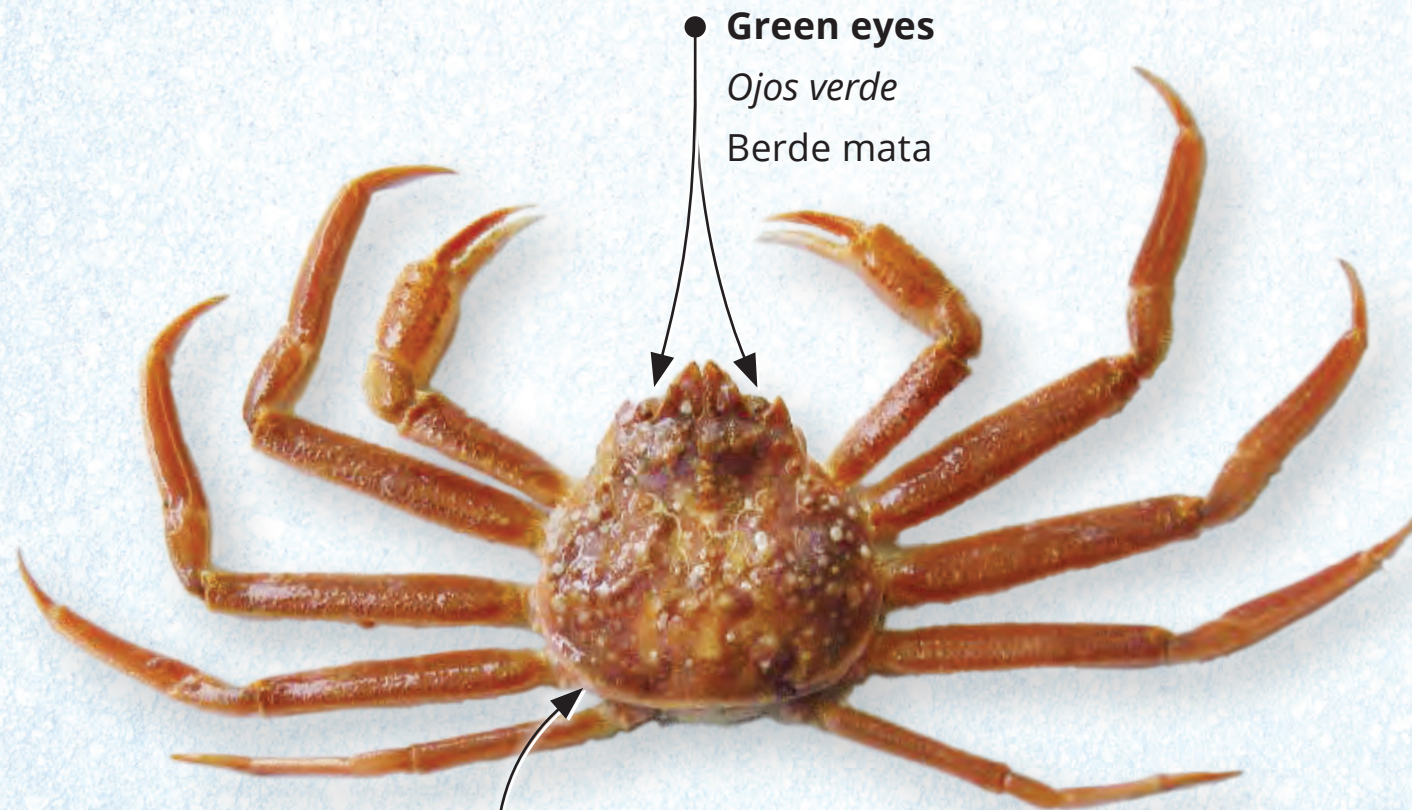


Red eyes
M shaped epistome

932

Snow Crab *(Chionoecetes opilio)*

Distribution: Bering Sea north of Alaska peninsula (Not in Aleutians) and in the Beaufort Sea as far as Cape Perry. To 450 meters.

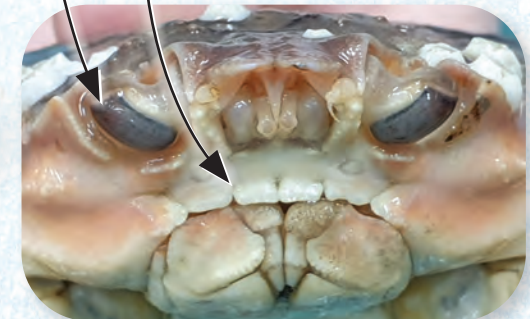


● **Green eyes**
Ojos verde
Berde mata

● **Rounded lateral margin**
Margen lateral redondeado
Bilugan lateral margin

● **Green eyes**
Ojos verde
Berde mata

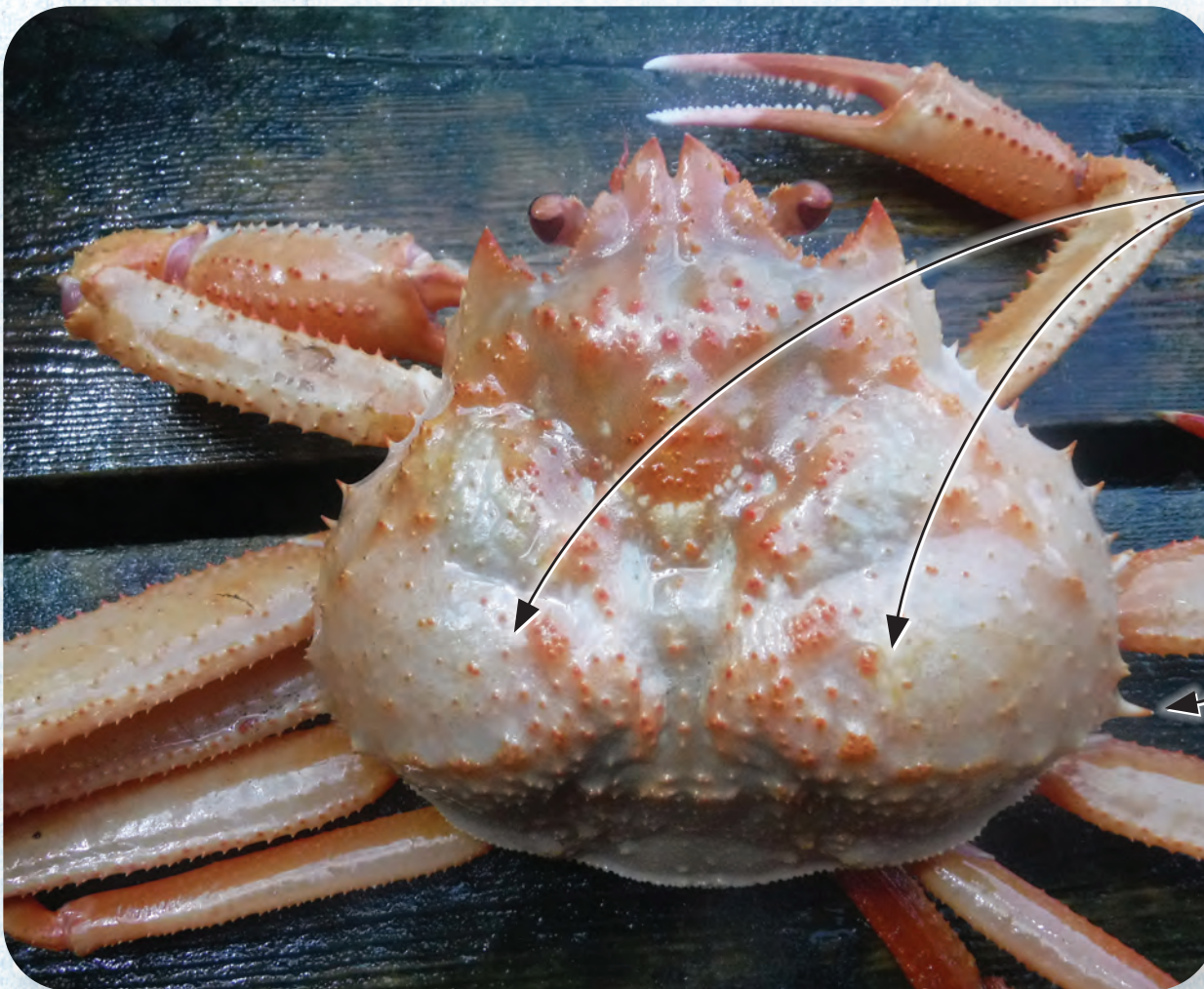
● **Horizontal shaped epistome**



934

Triangle Tanner Crab *(Chionoecetes angulatus)*

Distribution: North Pacific to the Bering Sea and adjacent to the Aleutian Islands.
90 to 3000 meters.



- **Triangle shapes**

En forma de triangulo

Pulang mata

- **Single large spine**

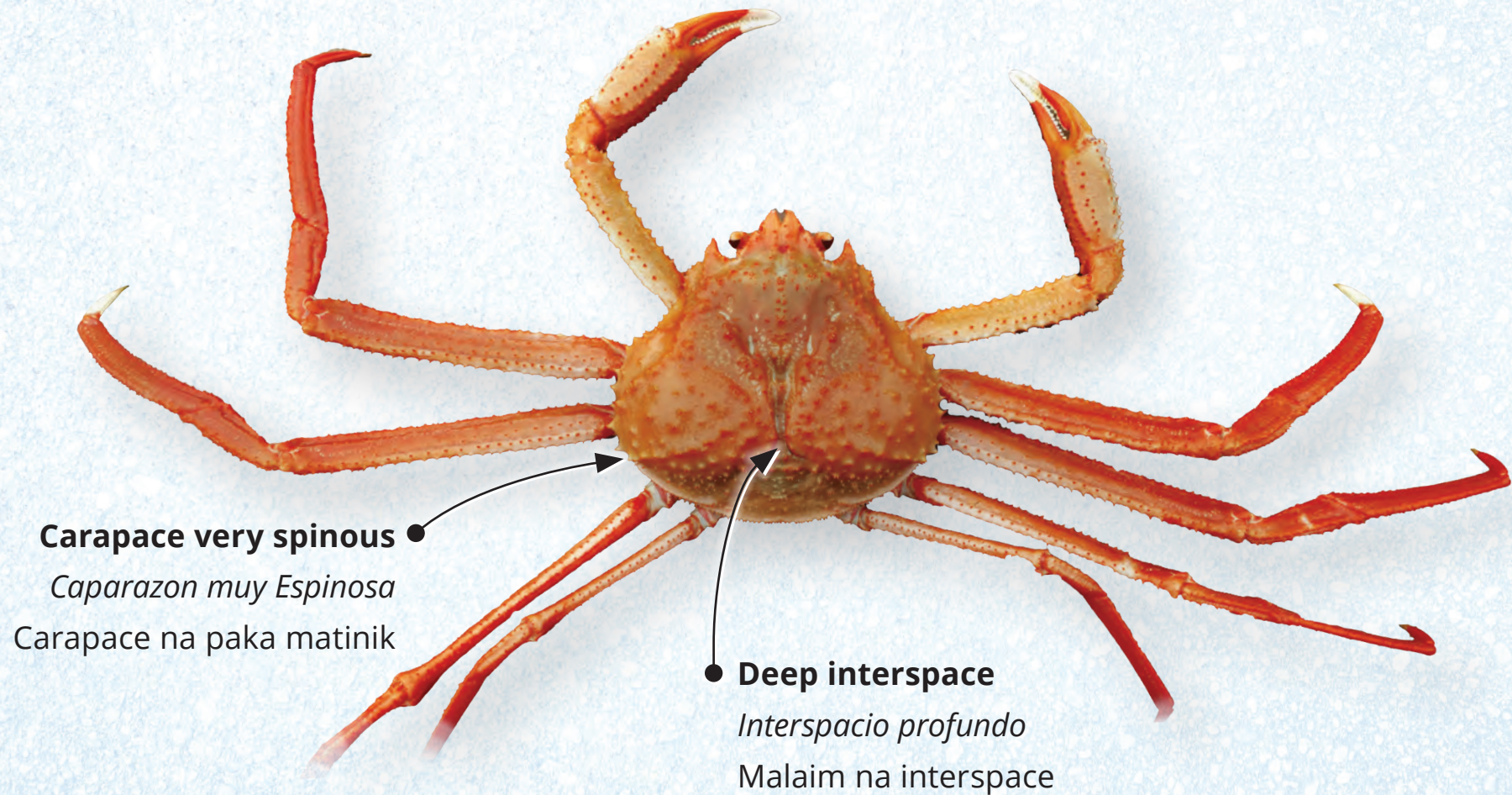
Unica columna vertebral grande

Nagissang malaking gulugod

933

Grooved Tanner Crab *(Chionoecetes tanneri)*

Distribution: North Pacific, primarily adjacent to the Aleutian Islands and Bering Sea.
53 to 1900 meters.



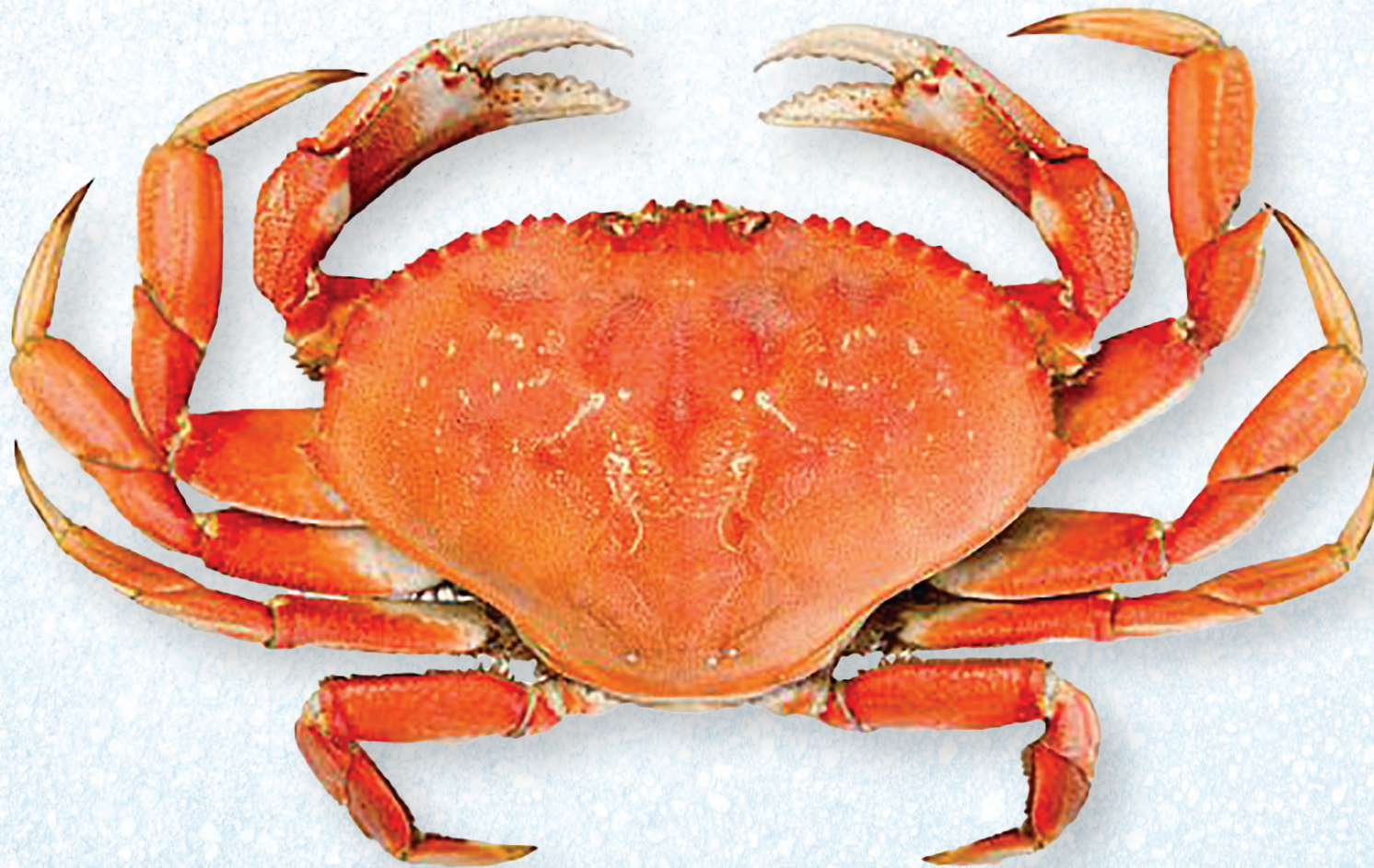
Comparison of *Chionoecetes angulatus* (top) and *C. tanneri*



910

Dungeness Crab *(Cancer magister)*

Distribution: Coastal waters South of the Aleutian Islands to and including Southeast Alaska. Intertidal to 200 meters.



953

Red Vermillion Crab *(Paralomis verrilli)*

Distribution: North Pacific, Bering Sea, Pribilof Islands. 850-2379 meters.



Scarlett coloration

Coloracion escarlata

Kulay iskalata

951

Anomuran King Crab *(Paralomis multispina)*

Distribution: Bering Sea, Aleutians. Continental slopes and seamounts.



Numerous small spines
Numerosas espinos pequenas
Maraming maliliit na spines



Hair Crab

(Erimacrus isenbeckii)

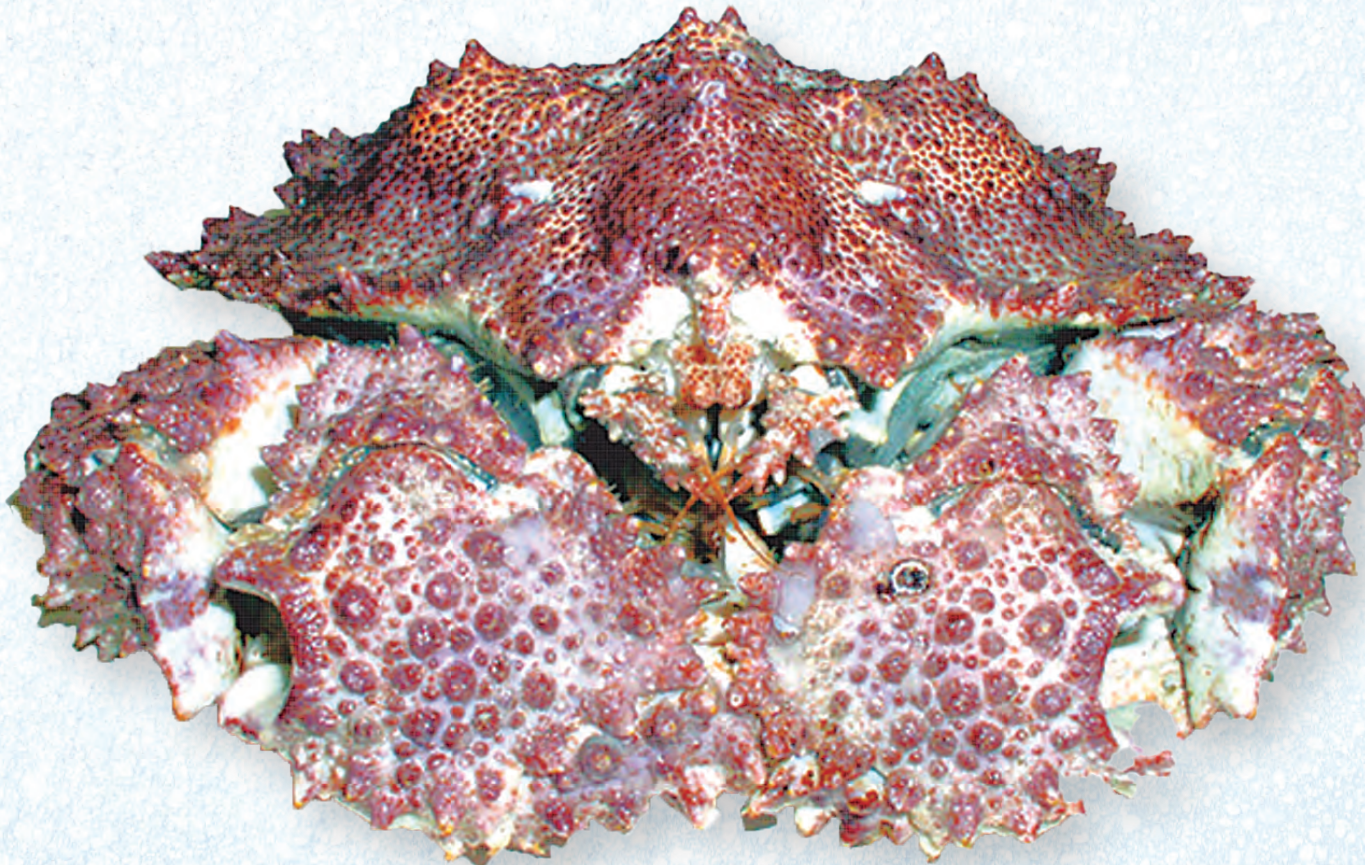
Distribution: Aleutian Islands, GOA from Kodiak west. 20-400 meters.



900

Brown Box Crab (*Lopholithodes foraminatus*)

Distribution: Northeast Pacific to Aleutian Islands and Bering Sea. Intertidal to 547 meters.



Decorator Crab (*Oregonia gracilus*)

Distribution: Bering Sea, Aleutians, GOA 10 to 1000 m.



Spiny Lithode Crab (*Acantholithodes hispidus*)

Distribution: South of Alaska Peninsula intertidal to 245 m.



Hermit Crab (Family Paguridae)

Alaska wide: Inter and subtidal habitats.



Pacific Lyre Crab (*Hyas lyratus*)

Distribution: Chukchi and Bering Seas, GOA and Southeast Alaska 9-640 meters.



Rhinoceros Crab *(Rhinolithodes wosnessenskii)*

Distribution: Notheast Pacific, Kodiak Island-South. Intertidal to 102 m.



Helmet Crab *(Telmessus cheiragonus)*

Distribution: Bering Sea, Aleutian Islands west to Atka, GOA from Kodiak west . Intertidal to 300 m.



Scaled Crab *(Placetron wosnessenskii)*

Distribution: Pribilof Islands to and including Southeast Alaska. Intertidal to 110 m.



Soft Crab *(Haplogaster grebnitzki)*

Distribution: Bering Sea, Aleutians, Southeast Alaska. Intertidal to 90 meters.



Additional Photos of Interest



Pod of adult female Southern Tanner crab. Part of a mating aggregation, Chiniak Bay Kodiak Island.



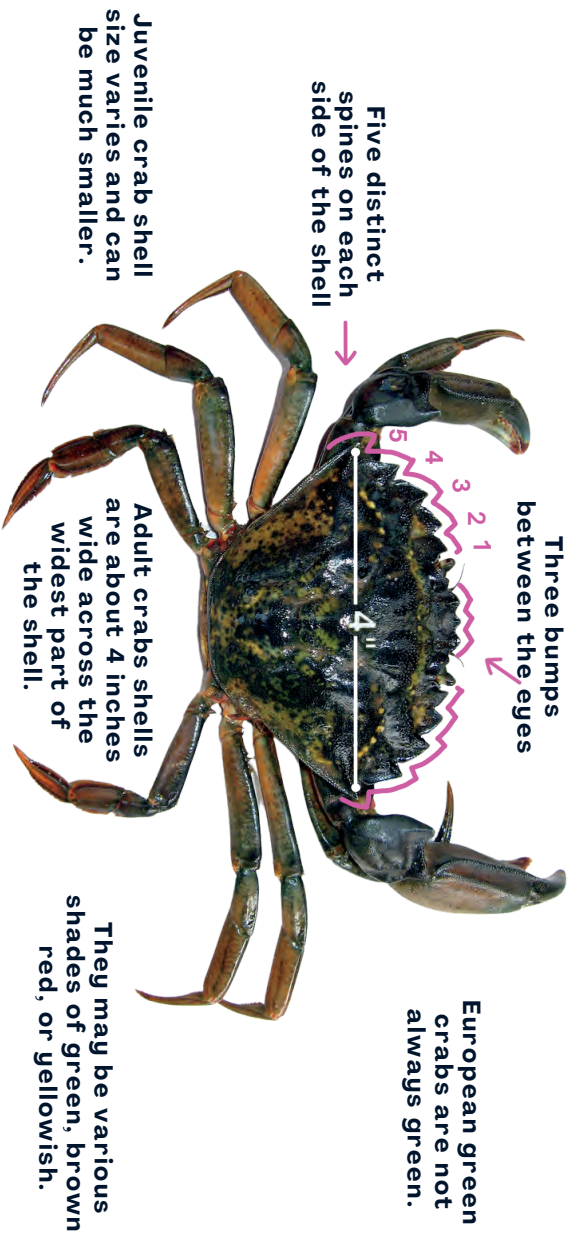
Mating pair of Southern Tanner crab. Female molting to maturity.

FOUND IN SOUTHEAST ALASKA

INVASIVE EUROPEAN GREEN CRAB

Salmon and shellfish habitat is destroyed by European green crabs.

How to Identify a European Green Crab



Spotted a European Green Crab? Now what do you do?

- Take multiple photos of the live crab or the crab shell. Collection and transport is prohibited.
- Note the number of crabs, the location (GPS coordinates or landmarks), and type of habitat.
- Report immediately to the Alaska Department of Fish & Game 1 (877) INVASIV.

NATIVE CRABS THAT LOOK SIMILAR TO EUROPEAN GREEN CRABS



Green Shore Crab

Three spines on each side of shell and only two bumps between the eyes.

Adults are not larger than 1.5 inches wide across the widest part of the shell.



Red Rock Crab

Greater than 5 spines on either side of the shell.

Adult are about 6.5 inches at the widest part of the shell. Their shell is dark red and fan shaped.

It is illegal to release nonnative and invasive species into Alaska waters or lands.



Scan the QR Code or call the invasive species hotline at 1 877 INVASIV to report observations of any invasive, nonnative species, or unusual plants or animals.

