



# Amazing Crab Fasts for Kids





















THAILAND



Crabs are invertebrates that are covered with a exoskeleton. In biology, they are classified as decapoda (deca = 10, poda = legs). There are more than 10,000 species of crabs around the world while at least 500 species are found in Thailand both freshwater and the seawater.

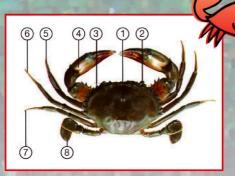
#### Shapes of Crabs

Crabs are related to shrimps but have higher evolution. Their abdomens were reduced and folded under the chest area. In males, the abdomen is a small triangle while in females it is broad with convex sides to store their eggs. They have ten legs. The first pair of the legs are claws used to catch and hold food as well as arm themselves. The second to fifth pairs are walking legs, each of which is segmented.

# Moulting

When crabs grow, they have to shed their shell to increase in size because the shell doesn't grow with them. This process is called moulting. After moulting crabs get bigger and have new soft shell which gradually becomes harder. It takes about seven days for the soft shell to get firm. As crabs grow older, the durations between moults becomes longer.

# Parts of Crab





1. Shell 2. Eyestalks

3. Antennae 4. Claws

5. - 8. the 2<sup>nd\_5th</sup> pairs of walking legs

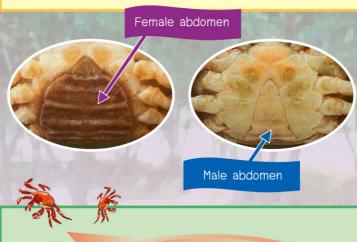
9. Mouth 10. Chest

11. Abdomen



#### Male or Female?

A way to tell the difference between adult male crabs and adult female crabs is to look at their undersides. The abdomen of females is broader than that of males in order to store eggs.





Do you know why crabs walk sideways?

Each leg of a crab is composed of 7 segments. The first segment is attached to the body. The joint of the second segment connects tightly to the third one and cannot bend. This makes crabs walk sideways.



# What are the differences between freshwater and marine crabs?



Freshwater crabs have different life cycle. They do not relate with the sea all their lifetime.

**Freshwater crabs** have fewer eggs than marine crabs but they have higher larval survival ratio.

Freshwater crabs have limited dispersal abilities.



# The Tiniest Crab ... The Largest Crab

The tiniest crab in the world is the pea crab while the largest one is the Japanese spider crab.

# Pea Crab





#### Pea Crab

The pea crab is the tiniest crab in the world. It is as small as a pea. It lives in the mantle cavity of mussels and bivalves.



# Japanese Spider Crab



#### Japanese Spider Crab

The Japanese spider crab is the largest crab in the world. Its leg span can be up to 4 metres. The carapace can be up to 37 centimetres. It can weigh up to 20 kilograms. The

body is orange and has 8 legs and 2 claws. It lives in the Pacific Ocean at the depth of 300-400 metres around the islands of Japan. It feeds on carcasses and sea creatures such as shrimps and molluscs. Its life span can be up to 100 years.







The hermit crab is not a snail. Scientifically it is catergorised as crab. It has no hard outer shell as crabs do. There are 50 species of hermit crabs in Thailand, living in mangroves, sand beaches, muddy sand, rocks and coral reefs as well as the deep sea. Some live on land near sea shores covered with fallen leaves and plant roots.

#### Mollusk shell as shelter

The hermit crab uses mollusk shell as shelter from danger because it has soft abdomen. If the soft part of the body is injured, it will die. As for the hermit crab, the shell serves as protection from harm caused by fishes or other marine life.



Having mollusk shell as shelter is natural behavior of the hermit crab inherited from its ancestors. This is the evolution for survival of the hermit crab. As it grows in size, it has to find new bigger shell which matches its body.

#### Mollusk Shell Home of Hermit Crab

Home or shelter of the hermit crab is mollusk shell such as Nile top shell, and wing shell and tritor trumpet.



# What is importance of shelter?





As you have known, the hermit crab needs mollusk shell to be its shelter from danger. Unfortunately, there is not enough shell for it as the shell is collected continuously by tourists and vendors for private collection or sale as souvenirs. This forces it to find new kinds of shelters such as cans or plastic bottles. An easy way to help protect the hermit crab is not to collect or destroy mollusk shell in nature.

## Crabs and Idioms

In Thai language, there are idioms that are literally related to crabs



#### Reed-Luerd-Gub-Pu; to get blood out of a crab

to squeeze someone for something that he or she is not capable of giving. For example, squeezing the poor for money. It is like to get blood out of a crab which was understood it has no blood like other animals. Actually a crab has blood which is blue.

### Jaap-Pu-Sai-Kra-Dong; to catch crabs and place them in a threshing basket

means being naughty. Crabs are not stay still when they are put in a container. They keep trying to escape. This idiom is used when you describe someone that is naughty and not willing to be under controlled.

#### Waang-Gaam; Waving the claws.

means to behave like you think you have great power over someone. Claws are organs of some animals such as shrimps and crabs. They are used to catch food. This idiom came from the behavior of crabs or shrimps waving claws, and is used to describe someone who behaves like he thinks he has great power over someone.



## Benefits of Crabs

crabs live on land and in the water.

They serve as food for humans such as the blue crab, the black crab and the mangrove crab. Nowadays crab meat is produced for domestic consumption and export.

**crabs** play important roles in nutrient cycles, from mangroves to the sea. For example, mangrove crabs feed on mangrove leaves and release their fecal matter to the environment. This helps degrade organic matter into small pieces which other organisms like bacteria can make use of Like mangrove crabs, hermit crabs help clean the beach by eating dead or decaying material.

crabs are not only food for humans but serve as food for other creatures especially sea creatures. Crabs are part of the food chain in the sea. They are eaten by larger animals such as ground fish or coral reef fish while they feed on small surface animals such as other crabs, marine worms and baby fish. They feed on algae or dead animals too. In other words, crabs help transfer energy from small animals to bigger ones so they complete the food chain in the sea and coastal ecosystems.



# The Freshwater Crabs Given Scientific Names by Royals

When scientists discover a living thing and examine if it is not given a scientific name before, they were name after importance persons in their honors.



#### Thaipusa sirikit

It was given the scientific in honor of Her Majesty Queen Sirikit, as of 23 December 1991. The crab has three colours-red, white and blue violet. Its walking legs are red. Both sides of the carapace and claws are white. The middle

area of the carapace and eyes are blue violet. The mouth is red. The width of carapace is between 17-48 millimetres. It was found in Baan Naam Jone, Salyoke, Kanchanaburi Province.

#### Potamon galyaniae

It was given the scientific in honor of Her Royal
Highness Princess Galyani Vadhana, as of 22 July
1999. The crab has three colours-darlx red,
orange red, and white. The edge of carapace,
eye sockets and mouth are dark red. The claws are dark red
except for the tips of the claws are white. The width of carapace
is between 35-46 millimetres. It was found in Tachalaeb,
Srisawas, Kanchanaburi Province.

South

North

Centr

#### Phricotelphusa sirindhorn

It was given the scientific in honor of Her Royal Highness Princess Maha Chakri Sirindhorn, as of

24 February 1988. The crab has white carapace and claws. The eye sockets and mouth are dark purple. The width of carapace is between 9-25 millimetres. It was found at Ngao waterfall in Ranong Province.



Professor Phaibul Naiyanetr of the Department of Biology, Chulalongkorn University, discovered new species that was not given scientific names before so he requested for royal permission to name those new species of freshwater crab.



#### Pupamon sangwan (Naiyanetr, 1997 (synonym *Dromothelphusa sanowan*)

It was given the scientific in honor of Her Royal Highness Somdet Pra Srinagarindra Boromarajajonani, as of 19 September 1996. The crabs have five colours-red, dark purple, blue, white and brown. The carapace is dark purple. The edge of The tips of claws are white. The four pairs of walking legs are dark purple. The tips of walking legs are reddsh orange. The width of carapace is between 23-42 millimetres.

It was found at Baan Ko Saen Jai in Doitung, Maefaluang,

Northeast

#### Indochinamon bhumibol (Naiyanetr, 2001) (synonym Potamon bhumibol)

Chiana Rai Province

It was given the scientific in honor of His Majesty King Bhumibol Adulyadej, as of 5 January 2000. The crab has three colours-brown, purple and orange. The carapace is dark brown. The four pairs of walking legs and the claws are dark brown. The tips of claws are orange. It is the largest freshwater crab in Thailand. The width of carapace is between 31-87 millimetres. It was found at Phu Luang in Wang Saphung, Loei Province.



#### Thaipotamon chulabhom

It was given the scientific in honor of Her Royal Highness Princess Chulabhorn, as of 9 June 1992. The crab has three colours-dark violet, yellow-orange and white. The four pairs of walking legsare orange. The tips of the legs

are white. The carapace is dark violet. The both sides of carapace, eye sockets and claws are yellow-orange. The tips of claws are white. The width of carapace is between 30-42.5 millimetres. It was found in Dunlumpun forest, Nachuek, Mahasarakam Province.



# Do you know?

Do you know what crab sticks are made from? And why are they called crab sticks?

Crab sticks are officially called imitation crab meat. It came from the idea that around 90% of fish catched from the sea are small in size, which have less economic value, and those fishes are usually used for feed production, indicating low efficiency of use of marine resources. This made a Japanese company create crab sticks for the first time in the world in 1975.

Thailand is one of the countries that has potential for fisheries. Many companies have produced crab sticks for years. Crab sticks can be made from many species of fish such as threadfin breams, purple-spotted bigeyes, cutlassfishes and white perches. The crab stick production begins with removing heads and internal organs of fish. After that fish are squeezed by machine to have only fish meat. The meat is then mixed with ingredients and cooked. Finally, by machine, the cooked fish meat is made to have texture similar to crab meat, and shaped into sticks with colour. Some factories shape the meat into claws.





# Last But Not Least (Coconut Crab

The coconut crab evolved from the hermit crab, it was given a scientific name as Birgus latro. It is the largest arthropod living on land. A mature coconut crab can be up to 40 centimetres in length and weigh up to 4.1 kilograms. Generally, males are larger than females. It has ten legs. The first pair of legs have big claws. The next three pairs are walking legs. The last pair of legs are very small and used for cleansing the breathing organs. This last pair of legs are usually held inside the carapace, in the cavity containing the breathing organs.





Although coconut crabs evolved from the hermit crab, only the juvenile use salvaged mollusk shells to protect their soft abdomens. The mature coconut crabs do not carry shells but instead harden their abdomens by depositing chitin and chalk. The hardened abdomen protects the coconut crab and reduces water loss on land. They moult annually. The moulting takes 30 days. After moulting, their abdomens are soft and vulnerable and need protection.

The diet of coconut crabs mainly consume fleshy fruits, especially coconuts. They also consume leaves, rotten fruits, tortoise eggs and dead animals. They eat animals with slow movement like turtle hatchlings.

In Thailand, few coconut crabs are found in some islands in the Andaman sea such as Similan Islands and some small islands near Phuket Province. The people living in such areas catch the crabs for food and make them as souvenirs for tourists. This can possibly make the crabs become extinct in Thailand.

# Bio kith for kids

No. 1

NO. 2

No. 5

No. 4









No. 5

No. 6

No. 7









**United Nations Decade on Biodiversity** 



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