



# DIVISION: TAKE A BOW

From a tantalizing courtship dance to demonstrations of intimidating power, from a waggle dance of a food location to a tricky mother's feeble cries as she draws a "broken" wing to lure a predator away from her nest of chicks, many animals are peak performers.

## Three Key Adaptations for Tournament:

### Adaptation 1: Secon largest seal in world

- Allows them to be bigger than most of their prey and intimidate other sea creatures

### Adaptation 2: Diving abilities

- Renowned for their **long migration distances and their incredible diving abilities**, which allows them to dominate the seas.

### Adaptation 3: Inflatable nose

- Adult males use their large, inflatable noses during the winter breeding season to resonate sound when vocally threatening each other.

## Biome: Geographic Range & Habitat:

- can be found in California and Baja California, though they prefer to frequent offshore islands rather than the North American mainland.

## Diet and Trophic Level:

- Northern elephant seals' diet primarily consists of squid and fishes, but they also consume rays and sharks.

## Size:

- 10 to 13 feet

## Summary:

- The northern elephant seal is the largest of the “true” seals in the Northern Hemisphere. They have one of the longest migrations of any mammal; some have been recorded traveling over 13,000 miles roundtrip. (National Geographic)(NOAA)

# Northern Elephant Seal

*(Mirounga angustirostris)*



## Three Key Adaptations for Tournament:

### Adaptation 1:

- *The ability to hear and recognize vibrations in the ground.*

### Adaptation 2:

- *Their huge ears that help them stay cool in the humid temperatures in rainforests.*

### Adaptation 3:

- *The ability to smell food sources from great distances due to poor eyesight.*

## Biome: Geographic Range & Habitat:

- *Forest Elephants live in tropical moist forests, located in central and western Africa.*

## Diet and Trophic Level:

- *Forst Elephants consume leaves, grasses, seeds, fruits, and tree bark.*

## Size:

- *Their height varies from 2.4-3 meters and weigh between 1,800 and 7,000 pounds.*

## Summary:

- *The forest elephant is one of the two living species of African elephant and one of world's largest living land animals, which inhabit the dense rainforests of west and central Africa.*

# Forest Elephant

*(Loxodonta cyclotis)*



## Three Key Adaptations for Tournament:

### Adaptation 1:

- *Large Ears* – The size of elephant ears relates to maintaining optimal body temperature, as the ears consist of many thousands of thin blood vessels, allowing heat to escape, and elephants can use their ears to fan their bodies.

### Adaptation 2:

- *Tusks* – Forest Elephants can use their tusks to dig, fight, lift things, and strip trees of bark, they also help to defend the elephant's trunk.

### Adaptation 3:

- *Trunk* – Elephants have prehensile trunks, which are used for a variety of purposes including moving things, accessing food, eating, drinking, and more.

## Biome: Geographic Range & Habitat:

- *Forest Elephants* are native to the temperate forests of mid to south Africa, but at this point, the majority of these elephants can be found in Gabon and the Republic of Congo.

## Diet and Trophic Level:

- *Forest Elephants* are herbivores, and as such, are primary consumers. They primarily eat foliage on trees in the forests they are named for.

## Size:

- *Elephants* are Earth's largest land mammal, at approximately 10 feet tall, and as big as 10 feet long. They can weigh between 4000 and 12000 pounds.

## Summary:

- *Elephants* are major large and powerful land mammals with numerous adaptations like their trunks and tusks that enable them to serve as major contenders for March Mammal Madness.

# Forest Elephant

*(Loxodonta cyclotis)*



# Great White Shark

(*Carcharodon carcharias*)



## Three Key Adaptations for Tournament:

### Adaptation 1: Regional Endothermy

- *This allows the shark to retain body heat and maintain elevated body temp. This adaptation causes a higher muscle metabolism allowing faster swimming.*

### Adaptation 2: Electroreception

- *This adaptation allows the shark to detect electric fields made by other organisms, which helps locate camouflage or hiding prey, especially in low visibility.*

### Adaptation 3: Strong sense of Smell

- *Great White Sharks have a strong sense of smell which allows them to locate prey over great distances. They have detect blood in water and can track scents for very long distances.*

## Biome: Geographic Range & Habitat:

- *Marine*

## Diet and Trophic Level:

- *The GWS's trophic level is 5 and their diet usually consists of bottom fish, smaller sharks/rays, squid and schools. Larger sharks usually target seals and sea lions and sometimes display scavenger behaviors.*

## Size:

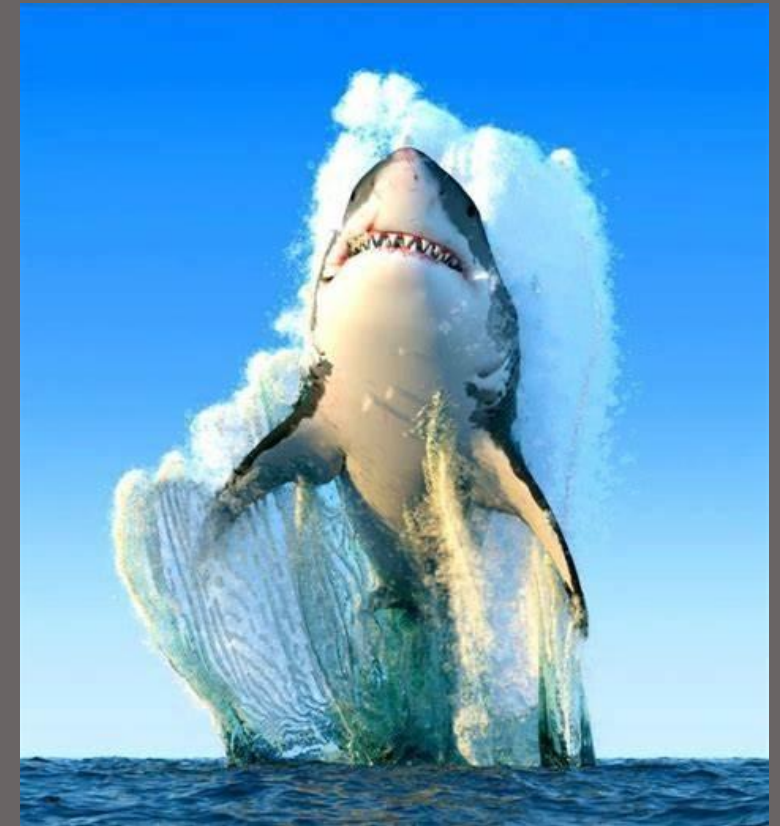
- *Average female: 15- 16 ft long*
- *Average male : 11 – 13 ft long*

## Summary:

- *The Great White Shark is found in coastal waters and are apex predators. They contribute to their marine ecosystems by controlling regulating prey species population. Like many other animals, Great White Sharks face threats of habitat destruction, pollution and overfishing.*

# Great White Shark

(*Carcharodon carcharias*)



## Three Key Adaptations for Tournament:

### Adaptation 1 – Extreme Senses:

- *This shark's senses have been adapted for efficient dispatch of prey; with heightened sense of smell, sight, and unique electroreception, it can easily find and track its food.*

### Adaptation 2 – Intelligence:

- *Great Whites are considered highly intelligent – it's one of the smartest shark species in the world. Because of this intelligence, they have a complex social hierarchy and can coordinate their senses when predating.*

### Adaptation 3 – Hunting:

- *These sharks have evolved to have a torpedo-shaped body, allowing them to swim at a staggering 35 miles per hour. When they catch their victim, they can bite down with 7 rows of teeth – almost 300 teeth at maximum.*

## Biome: Geographic Range & Habitat:

- *Near-coastal-Pelagic (open ocean) marine environments.*

## Diet and Trophic Level:

- *Tertiary Consumer; consumes large fish, sting rays, other shark species, sea lions, dolphin species, and even sea turtles. They occasionally have shown scavenger behavior as well.*

## Size:

- *426-457cm (168-180 inches OR 14-15 feet!)*

## Summary:

- *Great White Sharks are the top predators of most ecosystems they live in – and it shows. Extreme senses, high intelligence, speed, and hundreds of teeth, they make clean work of anything they prey on.*

### Three Key Adaptations for Tournament:

#### Adaptation 1: Their huge, teardrop Shells!

- *Rubbery Skin stretched over a flexible cartilage layer, which allows them to dive deep – to depths of 4,200 ft. They swim faster, further, and deeper than any other species.*

#### Adaptation 2: Pointed tooth-like cusps & sharp-edged jaws

- *They lack crushing or chewing plates like other species. They have pointed tooth-like cusps and sharp jaws that help them to eat soft-bodied prey. They have backward-pointing spines that help to retain the gelatinous prey.*

#### Adaptation 3: Endothermy

- *Metabolic generated heat, that allows them to maintain high body temperatures even at deeper depths of the ocean where it is extremely cold.*

### Biome: Geographic Range & Habitat:

- *They primarily live in the regions of Alaska, New England/Mid-Atlantic, Pacific Islands, Southeast, West Coast. They are found in temperate and tropical marine waters, nesting on tropical beaches.*

### Diet and Trophic Level:

- *They are secondary consumers that eat primary consumers. They primarily eat soft-bodied open-ocean prey, which includes jellyfish, salps, squid, crustaceans, fish, seaweed (however are prey to killer whales and tiger sharks; and their eggs fall prey to seabirds, dogs, ghost crabs, etc).*

### Size:

- *As adults they reach a length of 5 to 6 feet and weight from 750 to 1,000 pounds. (est. Lifespan is 50+ years)*

### Summary:

- *This species of sea turtles use not only their huge size, but their unique features like endothermy and rubbery teardrop shell to survive. They dive deeper and faster to depths of 4,200 ft and live in all oceans except the arctic where they eat soft-bodied prey, such as jellyfish.*

# Leatherback Turtle

*(Dermochelys coriacea)*



## Three Key Adaptations for Tournament:

### Adaptation 1:

- *Large and keen eyes to help them see and detect predators*

### Adaptation 2:

- *Oversized Windpipe and Heart, to carry large amounts of oxygen and blood to and from its large lungs.*

### Adaptation 3:

- *Scent communication, in order to mark territories and warn others of danger*

## Biome: Geographic Range & Habitat:

- *Pronghorn are found in open prairie and desert habitats in Western North American. Located in flat terrains with little trees. Their habitat ranges from sagebrush plains of the US to the deserts of Mexico.*

## Diet and Trophic Level:

- *Pronghorns are herbivores, consuming grasses, forbs, sagebrush, and more prairie plants.*

## Size:

- *Up to 1.04 M*

## Summary:

- *Pronghorns are hoofed animals related to goats and antelopes and have reddish brown color, with the shape of a deer with long legs, a short tail, and a long snout. They have white markings on their face, stomach and buttocks.*

# Pronghorn

(*Antilocapra americana*)





## Three Key Adaptations for Tournament:

### Adaptation 1:

- A prehensile tail without hair on the bottom side, which they use for grasping during locomotion.

### Adaptation 2:

- The upper molars have sharp, shearing crests that are used in grinding leaves.

### Adaptation 3:

- They move slowly using a quadrupedal mode of locomotion and they have five-toed, grasping feet.

## Biome: Geographic Range & Habitat:

- Black howler monkeys can be found in southern Brazil, Paraguay, eastern Bolivia, and northern Argentina. They live in primary, arid deciduous, and broadleaf forests.

## Diet and Trophic Level:

- These tree-dwelling herbivores mainly consume tree and vine leaves, flowers and tropical forest fruits. Meaning they are primary consumers.

## Size:

- Males measure 24 to 26 inches (60 to 65 centimeters) long with a 24 to 26 inch tail (60 to 65 centimeters)

## Summary:

- Black howler monkeys are one of the few primate species with different coat colors in males and females—a trait called sexual dimorphism, which is a broad term that includes differences in size, behavior, and other characteristics between males and females of the same species.

# Howler Monkey

(*Alouatta seniculus*)



# Howler Monkey

*(Alouatta seniculus)*



## Three Key Adaptations for Tournament:

### Adaptation 1:

- *A prehensile tail without hair on the foot side, which they utilize for getting a handle on amid movement .*

### Adaptation 2:

- *The upper molars have sharp, shearing peaks that are utilized in crushing takes off .*

### Adaptation 3:

- *They move gradually employing a quadrupedal mode of movement and they have five toed, getting a handle on feet.*

## Biome: Geographic Range & Habitat:

- *Dark howler monkeys can be found in southern Brazil, Paraguay, eastern Bolivia, and northern Argentina. They live in essential , bone-dry deciduous, and broadleaf forests.*

## Diet and Trophic Level:

- *These tree dwelling herbivores primarily expend tree and vine takes off , blossoms and tropical timberland natural products . Meaning they are essential buyers .*

## Size:

- *Males measure 24 to 26 inches (60 to 65 centimeters) long with a 24 to 26 inch tail (60 to 65 centimeters)*

## Summary:

- *Dark howler monkeys are one of the few primate species with distinctive coat colors in guys and females a characteristic called sexual dimorphism, which may be a wide term that incorporates contrasts in estimate , behavior, and other characteristics between guys and females of the same species.*

## Three Key Adaptations for Tournament:

### Adaptation 1: Cryptic Behavior

- Coral snakes are shy and elusive creatures that prefer to avoid confrontation. They have adapted to remain hidden and only strike when they feel threatened or when hunting for food.

### Adaptation 2: Venom Composition

- The coral snake's venom is highly potent and neurotoxic, targeting the nervous system of its prey. This adaptation allows the snake to quickly immobilize its prey and subdue them before consuming them.

### Adaptation 3: Warning Colors

- The bright red, yellow, and black bands of the coral snake act as a warning for predators to stay away. This coloration is known as aposematism and is a common adaptation in many species of venomous animals.

## Biome: Geographic Range & Habitat:

- The coral snake is typically found in tropical and subtropical regions, such as forests, jungles, and grasslands of North and South America. They are often found in areas with sandy or loose soil, as well as near bodies of water. Coral snakes are most commonly found in the biome of tropical rainforests, where they can hide amongst the dense vegetation and damp ground.

## Diet and Trophic Level:

- The coral snake is a carnivorous reptile that preys primarily on other small snakes, lizards, and frogs. It is a secondary consumer and occupies the trophic level of a tertiary consumer in the food chain.

## Size:

- The coral snake is a small snake, usually between 20 to 30 inches long.

## Summary:

- The coral snake is a venomous snake found in the southern United States, Mexico, and parts of Central and South America. They inhabit forests, swamps, and grasslands, burrowing to hide. Coral snakes, measuring 1-2 feet, have red, yellow, and black banding as a warning signal to predators. Their potent venom, injected through specialized fangs, immobilizes prey. Their slender body and smooth scales aid in moving through soil and foliage. Coral snakes are vital to their ecosystems as both predators and prey.

# Coral Snake

*(Micrurus ibiboboca)*



# Coral Snake

(*Micrurus ibiboboca*)



## Three Key Adaptations for Tournament:

### Adaptation 1 - Venomous Bite:

- *Extremely venomous; one of the deadliest snakes on the planet. The venom is neurotoxic and can cause rapid paralysis and respiratory failure in victims. Just 15mg of venom can kill a full-grown human.*

### Adaptation 2 - Slender Body:

- *Slender body allows the coral snake to be agile and can efficiently maneuver through narrow/tight areas. This allows the coral snake to "bite and run"; a tactic that may be used against predators/larger animals.*

### Adaptation 3 - Eyesight:

- *Strong eyesight that can detect prey in low-light conditions.*

## Biome: Geographic Range & Habitat:

- *Dry, savanna/temperate environments; Southeastern United States and Central America.*

## Diet and Trophic Level:

- *Carnivore; Secondary Consumer. Their diet consists of small animals (birds, rats, lizards, etc.), and can include insects and bird eggs.*

## Size:

- *40-160cm (16-63 inches OR 1-5 feet).*

## Summary:

- *The coral snake is an efficient and deadly predator; with its excellent eyesight, deadly neurotoxic venom, and slender body it can stealthily take down prey. Anything that walks near one is at risk, so watch your step.*

## Three Key Adaptations for Tournament:

### Adaptation 1:

- *VERY diverse diet-can live off of many foods*

### Adaptation 2:

- *Immune to snake venom-blood contains venom-neutralizing peptides*

### Adaptation 3:

- *"Playing Dead" - When in danger, opossums play dead, emitting a foul odor and even sometimes foaming at the mouth for hours. This deters predators.*

## Biome: Geographic Range & Habitat:

- *Deciduous forests-North / South America (Southern US, Mexico, Canada)*

## Diet and Trophic Level:

- *Fruit, flowers, eggs, small mammals, carrion (Omnivores/opportunistic feeders)*
- *Secondary consumers*

## Size:

- *Similar to a house cat*

## Summary:

- *Opossums have a diverse diet but a largely non-diverse habitat. They could win the tournament thanks to their diets, immunity to most snake venoms, and ability to play dead.*

# Opossum

*(Didelphis virginiana)*



## Three Key Adaptations for Tournament:

### Adaptation 1:

### Adaptation 2:

- *Description*

### Adaptation 3:

- *Description*

## Biome: Geographic Range & Habitat:

- *Wooded habitats like deciduous forests.*

## Diet and Trophic Level:

- *Insects, worms, rodents, flowers, fruits, nuts, roadkill.*

## Size:

- *About the size of a small dog, 4-11 pounds*

## Summary:

- *Description*

# Opossum

(*Didelphis virginiana*)



## Three Key Adaptations for Tournament:

### Adaptation 1: Camouflage

- *Colors and patterns on their skin that help them blend in with their surrounding environment*

### Adaptation 2: Musk

- *The musk is secreted and smells unpleasant and deters attackers.*

### Adaptation 3: Flattening

- *These snakes have the ability to flatten their bodies in order to look more intimidating and similar to venomous snakes (Cobras).*

## Biome: Geographic Range & Habitat: North America

- *Inhabits eastern North America and the Great Plains*
- *Sandy, gravelly soils*

## Diet and Trophic Level:

- *Tertiary Consumer*
- *Primarily Toads*

## Size:

- *60 to 80 cm (23.6 to 31.5 inches) in length*

## Summary:

- *A toad eating carnivore that lives in the Great Plains with helpful adaptations like camouflage and musk that help them hide and defense against predators.*

# Hognose Snake

*(Heterodon platyrhinos)*



## Three Key Adaptations for Tournament:

### Adaptation 1: Plumage

- *The Flame Bowerbird has an elaborate body plan that flaunts its bright colors in a way that may be imposing to predators.*

### Adaptation 2: Intelligence

- *The Flame Bowerbird has strong observational skills and are very intelligent. This is displayed by their ability to construct elaborate bowers for mates.*

### Adaptation 3: Agility

- *As a relatively small flighted bird, the Flame Bowerbird is very agile, being able to traverse a dense jungle with precision at speeds of 20 mph on average*

## Biome: Geographic Range & Habitat: Dense Rainforest

- *The bowerbird lives in dense forests and rainforests. It primarily occupies the forest undergrowth.*

## Diet and Trophic Level: Primary/Secondary

- *The Flame Bowerbird's diet consists mainly of fruits, seeds, and insects.*

## Size: 25 - 29 cm

- *The Flame Bowerbird is a relatively small bird only growing to about 25 to 29 centimeters*

## Summary:

- *While the Flame Bowerbird is a relatively small bird, it has high intelligence, agility, and vibrant plumage, which help it to survive in its habitat.*

# Flame Bowerbird

*(Sericalus ardens)*





## Three Key Adaptations for Tournament:

### Adaptation 1:

- *They are well adapted for flight in their habitat. Their wings are short and rounded. They can navigate through their environment and seek resources due to their robust and agile flight.*

### Adaptation 2:

- *They have high levels of intelligence and creativity compared to other bird species. This shows that they have well-developed cognitive abilities.*

### Adaptation 3:

- *They have many "Anti- Predation" Strategies such as mobbing behavior and distracting tactics such as mimicry.*

## Biome: Geographic Range & Habitat:

- *They are native to the rainforests in New Guinea. They also live in other rainforests and tall, moist sclerophyll forests in eastern Australia. Their preferred habitat is dense, mature rainforests.*

## Diet and Trophic Level:

- *Their diets are mainly comprised of fruits, berries, and invertebrates. They are Primary/Secondary Consumers.*

## Size:

- **Size:** 35 cm
- **Weight:** Male: 280-380 grams, Female: 220-280 grams
- **Wingspan:** Males: 68-78 cm, 60-68 cm

## Summary:

- *The Flame Bowerbird is a small, beautiful, vibrant bird that lives in dense, mature rainforests. Their diet is composed of fruits, berries, and invertebrates. They have well-developed cognitive abilities, which allow them to have successful "Anti-Predation" strategies such as mobbing behavior and mimicry.*

# Flame Bowerbird

(*Sericulus ardens*)



## Three Key Adaptations for Tournament:

### Adaptation 1:Weaponary

- *Males will make a clapping sound with their wings when defending their territories or when courting a female*

### Adaptation 2:Wide Mouth

- *The Swamp Nightjar has a pretty wide mouth for the purpose of swallowing insects whole*

### Adaptation 3:Camouflage

- *The Swamp Nightjar has mottle coloring that allows for the bird to blend in against tree bark*

## Biome: Geographic Range & Habitat:

- *Typically found within wet grasslands and the open savanna. As their name states, this species is often found in moist and damp areas (such as swamps and rivers).*

## Diet and Trophic Level: primary/secondary

- *The diet of the Swamp Nightjar mainly comprises of insects.*

## Size:

- *It is 20-24 cm long and weigh 60-70g*

## Summary:

- *Overall, the Swamp Night jar is a medium sized bird, that is nocturnal.*

# Swamp Nightjar

(*Caprimulgus natalensis*)



## Three Key Adaptations for Tournament:

### Adaptation 1:

- *The bat have long a sharp teeth for grasping and tearing on prey.*

### Adaptation 2:

- *The wrinkles help the bat blend in with the surrounding dark environment.*

### Adaptation 3:

- *The wrinkles also help the bats extract juice from the fruit into the bat's mouth.*

## Biome: Geographic Range & Habitat:

- *They can be found Mexico to Brazil. They love to live in rainforest , cloud forest, and dry forest.*

## Diet and Trophic Level:

- *Fruit, like soft bananas and mangos and prefer overripe fruit.*

## Size:

- *55-70mm*

## Summary:

- *They are herbivores sometimes insectivores that live in South America and use their wrinkles to eat and survive.*

# Wrinkle-faced Bat

*(Centurio senex)*



## Three Key Adaptations for Tournament:

### Adaptation 1:

- *Their name comes from the fact that they raise and move their legs in the air to signal other members of their species.*

### Adaptation 2:

- *Like many frogs they have strong and long legs to help them jump and swim. They use these abilities to escape predators and hunt for food.*

### Adaptation 3:

- *The elegant dancing frog's green and brown color blends in with its surroundings acting as camouflage*

## Biome: Geographic Range & Habitat:

- *The elegant dancing frog is found in the West Ghats located in India. They inhabit tropical forest and can also be found near rivers.*

## Diet and Trophic Level:

- *They would primarily eat small insects due to their size.*

## Size:

- *A little over ½ inch*

## Summary:

- *The elegant dancing frog is a species of amphibian that is native to West India. They have a behavior where they "wiggle" their feet in the air so that's where they get their name.*

# Elegant Dancing Frog

*(Micrixalus elegans)*



## Three Key Adaptations for Tournament:

### Adaptation 1: Stingers

- *Stingers are more of a one-time defense but last mechanisms.*

### Adaptation 2: community dancing

- *This dancing allows for dancing and communication for the bees.*

### Adaptation 3:

- *Temperature regulation allows for the bees to regulate their temperature when it comes down to it.*

## Biome: Geographic Range & Habitat:

- *Generally, prefer a 20 and areas where there is an abundance of trees.*

## Diet and Trophic Level:

- *Honeybees are primary consumers at trophic level one. And consume pollen.*

## Size:

- *-one half to three fourths of an inch*

**Summary:** Honeybees in general are needed for growth and necessary for the development of habitats.

# Honey Bee

*(Apis mellifera)*



## Three Key Adaptations for Tournament:

### Adaptation 1: Warning Coloration

- *Honeybees have bright yellow and black stripes that stick out to warn predators from attacking them.*

### Adaptation 2: Stinger

- *If necessary, honeybees have the option to use their stinger, which causes a large amount of pain for the target, but in turn kills the bee.*

### Adaptation 3: Flight

- *Honeybees have precise control over their flight to escape predation and move around the environment quicker.*

## Biome: Geographic Range & Habitat:

- *Honeybees exist all over the world, but are primarily found in eastern regions like South, East, and Southeast Asia.*

## Diet and Trophic Level:

- *Honeybees are herbivores and primary consumers as they primarily feed on the nectar of flowers to produce honey in their hives.*

## Size:

- *The average size of the queen is about 0.75 inches long. The average size of a female worker is about 0.5 inches long, and the average size of the male worker is about 5/8 inches long.*

## Summary:

- *Honeybees are intelligent insects that navigate the environment quickly and efficiently and have strength in numbers, allowing them to ward off predation and defend the hive.*

# Honey Bee

(*Apis mellifera*)



## Three Key Adaptations for Tournament:

### Adaptation 1: Diapause

- *This adaptation allows for moths to remain in their cocoon for long periods of time when they sense unfavorable conditions whether it is cold temperature or a period where there may be food scarcity.*

### Adaptation 2: multiple mating strategies.

- *This moth has females that release pheromones to attract multiple mates. The female will mate with multiple males, which increases genetic diversity off the offspring.*

### Adaptation 3: 2nd instar boring

- *When the offspring hatches, it will bore into the plant rather than eating externally like other caterpillars. This protects it from insecticides and predators.*

## Biome: Geographic Range & Habitat:

- *Thrives in warm climates with access to corn. Native to asia but also prominent in australia and the americas.*

## Diet and Trophic Level:

- *Diet- almost exclusively corn. They are in the 3rd trophic level as herbivores.*

**Size:** Male; 20-26 millimeters (0.79 - 1.02 inches). Female; 26-30 millimeters (1.02 - 1.18 inches).

## Summary:

- *The small annoying agricultural pests, asian cornborer moths are herbivores, with adaptations to survive by utilizing stealth and survivalist methods during early development.*

# Asian Cornborer Moth

(*Ostrinia furnacalis*)

