



FOR IMMEDIATE RELEASE

July 3, 2008

ANIMAL SUPERHERO MAKES A BIG SPLASH AT FRESNO CHAFFEE ZOO

FRESNO, Calif. – The newest animals at Fresno Chaffee Zoo live in the water but are closely related to scorpions and spiders. They have ten eyes and ten legs, have blue blood and lay green eggs. They are living fossils since the species has been relatively unchanged for 445 million years -- even surviving the mass extinction of dinosaurs 65 million years ago. And they save lives everyday.

Horseshoe crabs (*Limulus polyphemus*) have been added to the touching experience at the Zoo's popular Stingray Bay attraction where they will fascinate visitors alongside the Zoo's cownose and Southern stingrays, and white spotted bamboo and nurse sharks.

The horseshoe crab is not really a crab at all but rather a hard-shelled marine arthropod more closely related to spiders than crustaceans. Like all arthropods (the group also includes lobsters and insects) they have segmented bodies, jointed legs, and a hard exoskeleton. Horseshoe crabs are in a class of their own, *Merostomata*, which means "legs attached to the mouth". Females are 9-12 inches across the widest part of the shell and 16-20 inches long. Males are smaller and measure 7-9 inches across and 13-16 inches from head to tail. Their spike-like tail is not dangerous and is used like a rudder when swimming and as a lever to right them if they become overturned. They walk on their five pairs of legs but swim on their backs by moving their abdominal plates. Horseshoe crabs mature at around nine years of age, shedding their shells as much as 16 times as they grow. They can live more than 20 years.

Like the other species in Stingray Bay, horseshoe crabs are found in the Gulf of Mexico and in the Atlantic Ocean along the coast of North America. The horseshoe crab dwells on the bottom of muddy and sandy bays and estuaries. They feed on bits of fish, mollusks, sea worms and other bottom-dwelling invertebrates. Since horseshoe crabs possess only a mouth opening and are jawless, they use spiny bristles on their legs to grind food before placing it in the mouth.

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The horseshoe crab is possibly the single most-studied invertebrate animal in the world due to its medical significance.

- Horseshoe crabs contain a substance called Limulus Amebocyte Lysate (LAL) that rapidly clots and encapsulates bacterium when it enters a wound in their body. LAL is used to ensure vaccines, intravenous drugs, and medical devices are free of dangerous endotoxins. Their blood can be extracted without harm to the animal.
- The light-sensing organs in their compound eyes and their ability to see ultraviolet light have contributed to research into the physiology of vision.
- Horseshoe crabs have also been helpful in finding remedies for diseases that have developed resistances to penicillin and other drugs.
- They have aided in the development of absorbable sutures and wound dressings for burn victims.

The horseshoe crab is not presently endangered, but harvesting and habitat destruction have reduced their numbers. In addition to their importance to the medical community, horseshoe crabs are an important food for Atlantic loggerhead turtles. Their eggs and larvae are eaten by invertebrates and fish, and are the primary source of fat for at least 20 species of migratory shorebirds.

Stingray Bay made a big splash in 2007 when more than 165,000 people experienced the underwater world of rays. Zoo attendance was up 28% and membership sales rose 31%. Stingray Bay reopened with sharks in addition to the rays on March 15, 2008 and the adventure will continue through September 14, 2008. Catch the wave and don't miss these amazing rays, sharks, and horseshoe crabs!

Admission to Stingray Bay is \$1.00 per person in addition to regular Zoo admission and free for Fresno Chaffee Zoo members and children under 2 years of age.

Fresno Chaffee Zoo is open every day of the year from 9 a.m. to 4 p.m. General admission is \$7 for adults, \$3.50 for children 2-11 and seniors 62+, and children under 2 and Fresno Chaffee Zoo members are free. The mission of Fresno Chaffee Zoo is to provide a fun, unique and up-close experience that strengthens the bond between people and wildlife. The Zoo is accredited by the Association of Zoos and Aquariums (AZA).

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