

## *Orthemis discolor* (Carmine Skimmer Dragonfly)

Order: Odonata (Dragonflies and Damselflies)

Class: Insecta (Insects)

Phylum: Arthropoda (Arthropods)



**Fig. 1.** Carmine skimmer dragonfly, *Orthemis discolor*.

[<http://bugguide.net/node/view/468527>, downloaded 28 February, 2016]

**TRAITS.** Previously called the orange-bellied skimmer, due to the underside of its abdomen appearing pale orange, but as the colour on the underside is rarely seen this is no longer used as a field mark (Paulson, 2012). This is a large, robust flyer. Male length 52-54mm, wingspan 90mm, hind wing length 40mm. Younger individuals are first brown, then scarlet (Whitehouse, 1943). The colour in an adult male is plum purple for the entire insect, head, thorax, abdomen and appendages (Fig. 1). Female length 51mm, thorax brown with sides striped with pale yellow, abdomen brown to red-brown with a distinct line arising on the prothorax and extending along the abdomen (Fig. 2).

**DISTRIBUTION.** Widespread in tropical systems over most of Central and South America and the Caribbean, and extending into the southern USA.

**HABITAT AND ACTIVITY.** Found in habitats ranging from ponds, marshes, swamps, drainage ditches, both brackish and freshwater habitats (Ross, 1986), to busy cities. Almost every type of

aquatic system are dwelling places for these insects. Their easy recognition must be due to their dense occurrence in well-populated communities, unlike many of the larger and even smaller species of dragonflies (Michalski, 1988). The immatures or nymphs are aquatic predators and predominate in the littoral zone of lakes, ponds, streams (De Marco et al., 1999). Littoral zone being that area near the shore where sunlight penetrates all the way up until the sediment and is home to aquatic plants and fish. Most do not frequent the same spots as adults that they inhabited as aquatic nymphs, and many are found miles away from their breeding ground, and even miles away from water. Males tend to be very territorial. When the female is ovipositing (laying eggs), she tends to fly 8-10cm above water, and transiently dips her abdomen in the water at intervals. At times, a male is hovering above (Whitehouse, 1943). Association with a more active and combative species, *Planiplax phoenicura*, changed the preference of *O. discolor* males from tall perches to lower vegetation. This demonstrates the significance of community composition and associations on territorial site selection (De Marco and Resende, 2004).

**FOOD AND FEEDING.** The diet of the nymphs consists of fish fry, when they inhabit aquaculture ponds (De Marco et al., 1999). The adult diet is determined by prey availability, and size-mediated and microhabitat-mediated constraints. They generally feed on flying ants, termites, gnats, flies and mosquitoes. They use their legs as a sort of tray or basket to catch their prey.

**BEHAVIOUR.** Generally, dragonflies tend to move away from their breeding site, after moulting and developing wings. Skimmers tend to fly year round however, during sunny weather, on a good rainy day, the Nariva swamp can be seen teeming with them. They tend to be solitary animals when it comes to mates and defending the eggs, but casually can be seen flying side by side. Mating behaviour involves the male's ability to control female's entry to oviposition resources. *O. discolor* prefer sites with tall perches, perhaps because this aided in seeking a mate. *O. discolor* are bottom ovipositors and prefer an intermediate between the two extremes, that is extensive plant coverage or complete absence (De Marco et al., 1999).

**APPLIED ECOLOGY.** Thus far not listed by the IUCN, International Union for Conservation of Nature, as a threatened species. Fish farms are a vital part of any economic community, especially in neotropical countries. This species poses a threat to fish fry as a potential predator. Dragonflies also prey upon bees, and beekeepers regard them as a nuisance as they can eat up to their own weight in 30 minutes. They are also prey for vertebrates such as birds, lizards, frogs, and fish, providing a critical means of interrelationship between aquatic and terrestrial food webs (Campbell et al., 2010).

## REFERENCES

- Campbell, W.B., Novelo-Gutierrez, R., and Gomez-Anaya, J.A. (2010). Distributions of oronate richness and diversity with elevation depend on windward or leeward aspect: implications for research and conservation planning. *Insect Conservation and Diversity*. **3**: 302-312.
- De Marco, P. Jr., Latini, A.O. and Reis, A.P (1999). Environmental determination of dragonfly assemblage in aquaculture ponds. *Aquaculture Research*. **30**: 357-364.
- De Marco, P. Jr., and Resende, D.C. (2004). Ecology, Behaviour and Bionomics: Cues for Territory choice in Two Tropical Dragonflies. *Neotropical Entomology*. **33**: 397-401.
- Michalski, J. (1988). A catalogue and guide to the Dragonflies of Trinidad (Order Ordonata). *Occasional papers*, Zoology Department. UWI, Trinidad. **6**.

- Paulson, D. R. (2012). The distribution and Relative Abundance of the sibling species *Orthemis Ferruginea* (Fabricius, 1775) and *O. discolor* (Burmeister, 1839) in North and Middle America (Anisoptera: Libellulidae). *International Journal of Odonatology*. **1**: 1, 89-93.
- Ross, C. E., (1986). The taxonomy of Jamaican Dradonflies (Ordonata: Anisoptera) with notes on their distribution and Ecology. Department of Zoology, Faculty of Natural Sciences, Mona, Jamaica.
- Whitehouse, F.C. (1943). A Guide to the Study of Dragonflies of Jamaica. Bulletin of the Institute of Jamaica. Science Series. **3**.

Author: Krystal Eccles

Posted online: 2016



**Fig. 2.** Female carmine skimmer dragonfly, *O. discolor*.

[<http://kacproductions.photoshelter.com/image/I0000AvU5VcV7.fE>, downloaded 1 March 2016]

For educational use only - copyright of images remains with original source