



## ***Cordulegaster sarracenia*, n. sp. (Odonata: Cordulegastridae) from east Texas and western Louisiana, with a key to adult Cordulegastridae of the New World**

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### **Abstract**

*Cordulegaster sarracenia* is described from spring seepages in pitcher plant bogs of southeast Texas and western Louisiana. It is most closely related to *C. sayi* of the *C. diastatops* group. It is unique among all North American species of its genus in having the mesepimeral and metepimeral stripes distinctly paler than the mesepisternal stripes in combination with yellow bands on S3–8 that are interrupted middorsally by the carina.

**Key words:** Anisoptera, Cordulegastroidea, *Zoraena*, new species, pitcher plants

### **Introduction**

The family Cordulegastridae currently contains about 45 species in three genera and is Holarctic with one species, *Cordulegaster godmani* (McLachlan), extending into Central America (Garrison *et al.* 2006). All 10 New World species are currently placed in *Cordulegaster*. Carle (1983) described *C. bilineata* and in doing so resurrected the genus *Zoraena* for it and two others, *C. diastatops* (Selys) and *C. sayi* Selys. Lohmann (1992) placed *C. sayi* in a new genus, *Archegaster* and erected a new subfamily, the Zoraeninae, for both it and *Zoraena*. Needham *et al.* (2000), Tennessen (2004) and Garrison *et al.* (2006), however, argue that the characters used by Carle and Lohman to split these species into multiple genera represent intermediate states and have opted for a more traditional view of placing all New World species in *Cordulegaster*. We follow these authors in placing all North American species in *Cordulegaster*.

*Cordulegaster talaria* Tennessen, *C. bilineata*, *C. diastatops*, and *C. sayi* are closely related and make up the *C. diastatops* group (Tennessen 2004) that is restricted to North America. Our new species falls within this group. Garrison *et al.* (2006) considered the discovery of new species for this genus in the New World to be “unlikely.” Three North American species, *C. bilineata*, *C. talaria* and the new species described here, have been described within the last 30 years, more than 100 years after the last species (*C. erronea* Hagen *in* Selys) was described in North America.

The new species we describe here was first recognized from photographs submitted to OdonataCentral (<http://www.odonatacentral.org>). On 29 March, 2009, Rick Nirschl photographed a male in the Big Thicket National Preserve (OC#312438). On 12 April 2010 Gary Spicer photographed another male at Gus Engeling Wildlife Management Area (OC#318429). Both were originally identified as *Cordulegaster maculata* Selys by the senior author and Dennis Paulson. On 16 April 2010, Terry and Troy Hibbitts photographed a male and a female at Boykin Springs Recreation area and the photos were finally recognized as representing something other than *C. maculata*. Our examination of specimens subsequently collected from the Boykin Springs area revealed they represented an undescribed species. This was a surprise because the area has been relatively well collected (Donnelly 1978; Abbott *et al.* 1997; Abbott and Stewart 1998; Abbott 2001, 2005, 2006, 2007, 2008, 2010), and this small family of large conspicuous dragonflies has been relatively well studied taxonomically.