From March 2015 to September 2017, a study focused on Odonata, funded by the German foundation ‘Stiftung Pro Artenvielfalt ®’ (Foundation Pro Biodiversity), was conducted at the swamp lakes ‘Pantano Cuba’ and ‘Pantano Longarini’, in the South-eastern coast of Sicily, near Pachino (Siracusa). This area represents the southern most Italian wetland-complex and is characterised by brackish and standing waters. Alongside with the new data collected during this study, unpublished data collected during previous years will also be reported in this communication, to provide the first complete picture of the Odonata found in this territory. A total of 25 different species were found in Pantano Cuba and Longarini, from the following families: three species of Lestidae (Zygoptera), four species of Coenagrionidae (Zygoptera), seven species of Aeshnidae (Anisoptera) and eleven species of Libellulidae (Anisoptera). Amongst these species, of particular interest is the discovery of *Brachytron pratense* (Müller, 1764), recorded for the first time in Sicily during this study and *Pantala flavescens* (Fabricius, 1798), never before observed in Italy except for the islands of Linosa and Lampedusa.