

Trithemis kirbyi near the Spanish-French border

Piet Brouwer

Contact: p.brouwer4@upcmail.nl

SUMMARY

Two sightings of *Trithemis kirbyi* are reported from the province of Huesca and located South of the Pyrenees. Those records are the most northernmost for the species so far.

RESUMEN

Se describen dos avistamientos de *Trithemis kirbyi* localizadas en la provincia de Huesca al Sur de los Pirineos. Se trata de las citas más septentrionales de la especie en la actualidad.

OBSERVATIONS

From June 28 to July 7 2016, three Dutch nature enthusiasts, Ed Zijp, Hans Boerma and myself, enjoyed a butterfly and dragonfly trip in the Spanish Pyrenees. Making day trips from our stakeout in Jaca (province of Huesca, Aragón), we were impressed by the rough, green landscape, which must be one of the of the last unspoiled wildernesses of western Europe. We saw many butterfly and orchid species which do not occur in northern Europe and recorded many interesting dragonflies, including *Calopteryx haemorrhoidalis*, *C. xanthostoma* and *Onychogomphus uncatus*.

Site 1. Río Flumen

On June 30 we visited a rocky stream in Natural Park Sierra de Guara (Figure 1), about 2 km west of Nocito, near the road to Lúsera (UTM ETRS89: 30T, 722.450, 4.688.660, altitud 1.040 m.a.s.l.). We spotted three bright red dragonflies, which first reminded us of *Crocothemis erythraea*. When we came closer however, the dragonflies turned out to have large orange spots in all four wings. We got the impression that this might be one of the African species from our field guide, which neither of us had seen before. Luckily we managed to take photographs (Figure 2) and back at the hotel our impression turned out to be correct: we had clearly seen the orange-winged dropwing *Trithemis kirbyi*.

Figure 1: The author at Río Flumen (Huesca)



Site 2. Río Veral

In retrospect I realized that I had seen one male of the same species three days before on a similar looking stream close to Ansó, 65 km to the northwest (UTM ETRS89: 30T, 677.700, 4.737.400, altitude 880 m.a.s.l.). I was not able to photograph the insect, but I am confident it was the same species because of the characteristic of the wing pattern.



Figure 2. A male of *Trithemis kirbyi* at Rio Flumen (Huesca).

Description and location of the Sites

Both sites are similar in many respects although they are both situated in different river basins. They are both located in the middle sections of streams which originate in the Pyrenees with a strong north south orientation. In addition, they are both approximately 25 km from their main rivers which in the case of site 2 (Rio Veral) is the Rio Aragon which flows west. Site 1 (Rio Flumen) flows into the irrigation canals and streams which constitute the Rio Cinca which flows south and east. The two main rivers are tributaries of the Rio Ebro; The Aragon joins the latter at Alfaro whilst the Cinca meets it south west of Lleida. The two confluences are separated by approximately 200 km. In addition, sections of the Rio Ebro lie in The Monegros Desert, which is a semi-desert region of Aragon prone to frequent droughts and with annual rainfall typically lower than 400 l/m².

The sites themselves are fairly open and sunny, with only scarce vegetation of shrubs (there is no riparian woodland), and characterized by the presence of rocky substrate.

Streams like these at high altitude differ dramatically between summer and winter. In summer, when temperatures are high and water levels are low, they

WILDERMUTH, H., & A. MARTENS (2014) *Taschenlexikon der Libellen Europas*. Wiebelsheim: Quelle & Meyer Verlag.

CANO-VILLEGAS, F.J. & S. CARPINTERO (2015) *Fenología y emergencia de la odonofauna de un estanque en la ciudad de Córdoba*. Póster presentado en SIO-2015, Córdoba, 1-3 Mayo 2015.

MARTIN, R., MAYNOU, X., LOCKWOOD, M., & LUQUE, P. (2016). *Les libèl·lules de Catalunya*. Barcelona: Brau.

PRUNIER, F., BROTONS PADILLA, M., CABANA, M., CAMPOS, F., CASANUEVA, P., CHELMICK, D., ... ZALDÍVAR LÓPEZ, R. (2015). Actualización del inventario provincial de Odonatos de España peninsular e Islas Baleares. *Bol. ROLA*, **6**, 59–84.

TAPETADO, D. G., MAÑANI, J., GIMENO-MARTÍNEZ, R., & CABRERO-SAÑUDO, J. (2015). Primeras citas de *Trithemis kirbyi* Selys, 1891 (Odonata: Libellulidae) de Madrid (España). *Bol. SEA*, **57**, 449–450.

ROLA (2015) Resumen anual 2014. *Bol. ROLA*, **5**: 53–110.

CANO-VILLEGAS, F. J., CABANILLAS ROLDÁN, D., GARCÍA MEDRANO, B., & ORTIZ ÁLVAREZ, A. (2016). Primera cita de *Trithemis kirbyi* Selys, 1891 (Odo., Libel.) en la provincia de Ávila y confirmación de su reproducción en Madrid (centro de España). *Bol. AeE*, **40**(1–2), 185–189.

may indeed be attractive to territorial males of *Trithemis kirbyi*. It is however doubtful if larvae are able to survive winters at these sites, which is vital to establish permanent populations; however as *Trithemis kirbyi* has multiple generations (Wildermuth & Martens, 2014; Cano-Villegas & Carpintero, 2015) per year it may successfully reproduce within a summer season. Its offspring may then further contribute to its range expansion.

Given the ecology of the species, other standing and running waters should be surveyed in the neighbouring valleys in order to establish if *Trithemis kirbyi* has already colonized the area, or if our observations merely refer to vagrants. As an example, the species is still localized in southern Catalonia, four years after the first records in the Ebro (Martin et al. 2016).

DISCUSSION

Trithemis kirbyi is expanding very rapidly in Spain, probably due to climate warming. This paper shows that the species has made a huge further leap northwards as its known northern range limit in 2015 was roughly on the line Madrid-southern Catalonia (Prunier et al., 2015 ; Tapetado et al., 2015 ; Cano-Villegas et al., 2016 ; Martin et al., 2016). The site at Río Flumen is approximately 45 km from the Spanish-French border, the site at Río Veral only about 20 km. This means it may be found in France very soon now, or is perhaps already present, most probably along the Mediterranean coast. Dragonfly observers in southern France should keep an eye out for bright red-and-orange dragonflies.

ACKNOWLEDGMENT

I thank Tim Termaat at Dutch Butterfly Conservation for confirming the identification of the photographed male and both Tim and Florent Prunier for improving the manuscript.

Trithemis kirbyi cercana a la frontera Franco-Español

Piet Brouwer

Palabras Claves: España, Huesca, Odonata, *Trithemis kirbyi*.