

## PRESENCE OF *CULICOIDES IMICOLA* (DIPTERA: CERATOPOGONIDAE) IN JAEN, SPAIN

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**ABSTRACT.** *Culicoides imicola* Kieffer is reported from 2 locations in the province of Jaen, Spain. The locations are outside the area where African horse sickness epizootics occurred from 1988 to 1990. The absence of African horse sickness in Jaen during this period may have been due to the low abundance of this species.

Between 1988 and 1990, outbreaks of African horse sickness (AHS) occurred in the Comunidad Autonoma of Andalucia, Spain. As a consequence, in 1990 the Junta de Andalucia initiated a survey of *Culicoides* species in all 5 provinces where the disease had occurred. This region included locations where the only proven vector of AHS viruses, *Culicoides imicola* Kieffer, had been found. The objectives of the survey were to determine the species occurring in these provinces, and their geographic and temporal distribution.

*Culicoides imicola* is widespread in Africa, has been reported from Portugal (Capela et al. 1993), and was first recorded in Spain in 1982 (Mellor et al. 1983), in the provinces of Cordoba and Badajoz. During the initial phase of the survey in Andalucia, *C. imicola* was found in Cadiz, Huelva, Malaga, and Sevilla (Ortega, unpublished data). The survey was later extended to the province of Jaen, where no cases of AHS had been reported, in an attempt to determine the eastern limit of *C. imicola* in Andalucia, and to evaluate the possible influences of the Guadalquivir River on its distribution.

Crepuscular and nocturnal *Culicoides* are strongly attracted to bright light, and a variety of traps equipped with incandescent or fluorescent lights have been evaluated (Holbrook and Bobian 1989). The traps used in this survey were of sheet metal, with 2 rectangular baffles at right angles above a cone (Lillie et al. 1979), and with a 60-W, 220-V bulb as a light source placed at

the center of the baffles. Samples were collected in a mixture of ethylene glycol and ethanol, and transferred to 70% ethanol for long-term preservation. From October 1992 to October 1993, traps were run weekly at Bailen (38°6'N, 3°46'W) and Carboneras (38°13'N, 3°37'W).

A total of 42 *C. imicola* were caught in Jaen, 4 in Carboneras during October and November 1992, and 38 in Bailen from October to December 1992, and June to September 1993. This indicated that *C. imicola* is present in these areas, but in rather low numbers.

The absence of AHS outbreaks in Jaen may have been due to: 1) the absence of *C. imicola* during the period of AHS transmission in the other provinces of Andalucia, 2) an incidence of *C. imicola* that was too low to sustain transmission, or 3) control measures taken in the neighboring provinces that prevented the extension of the disease into Jaen, even though the known vector was present. Regardless, the presence of *C. imicola* in Jaen provides the potential for the transmission of AHS or other *Culicoides*-borne diseases (such as bluetongue) that are transmitted by this common vector species.

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