

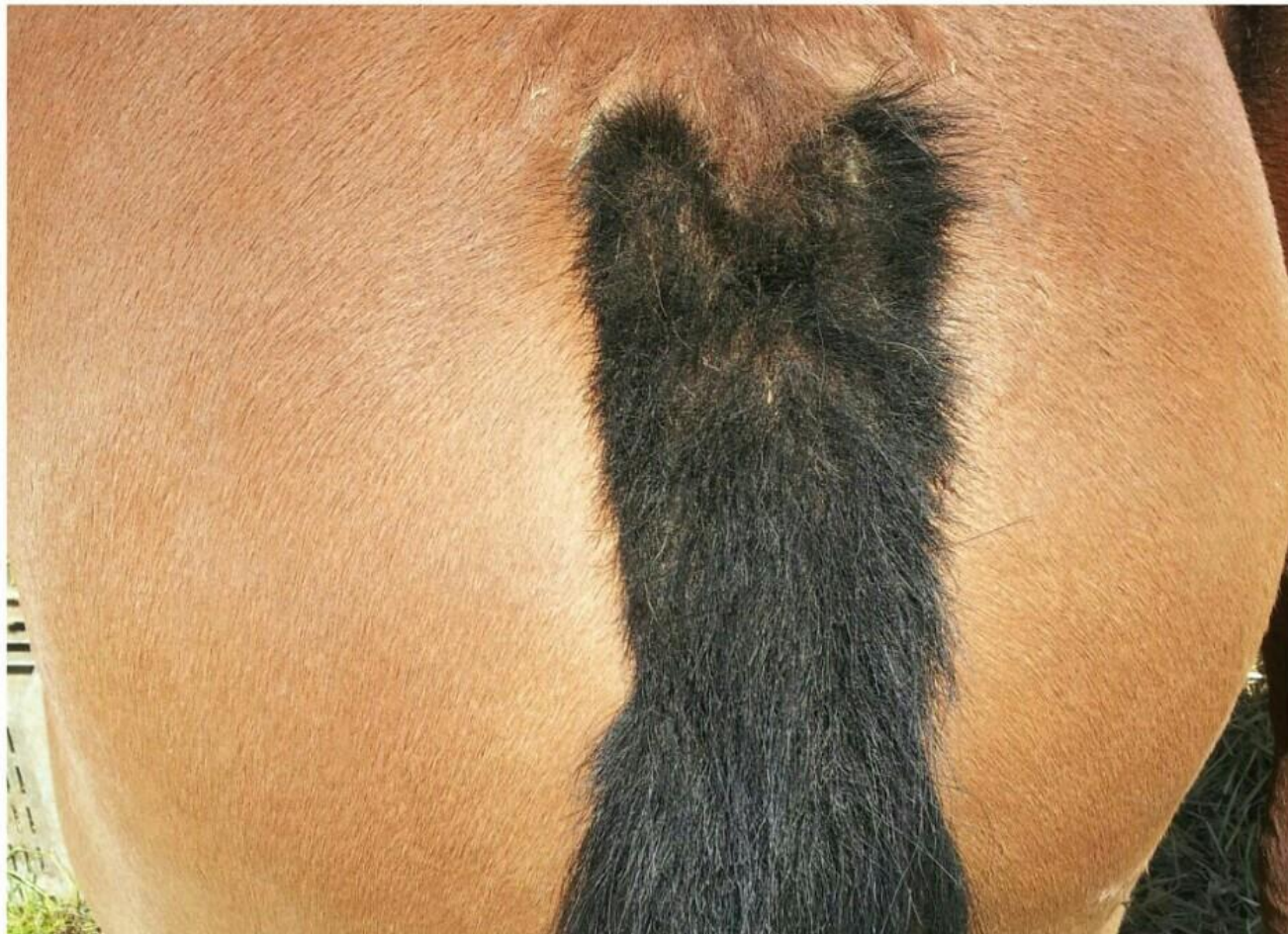
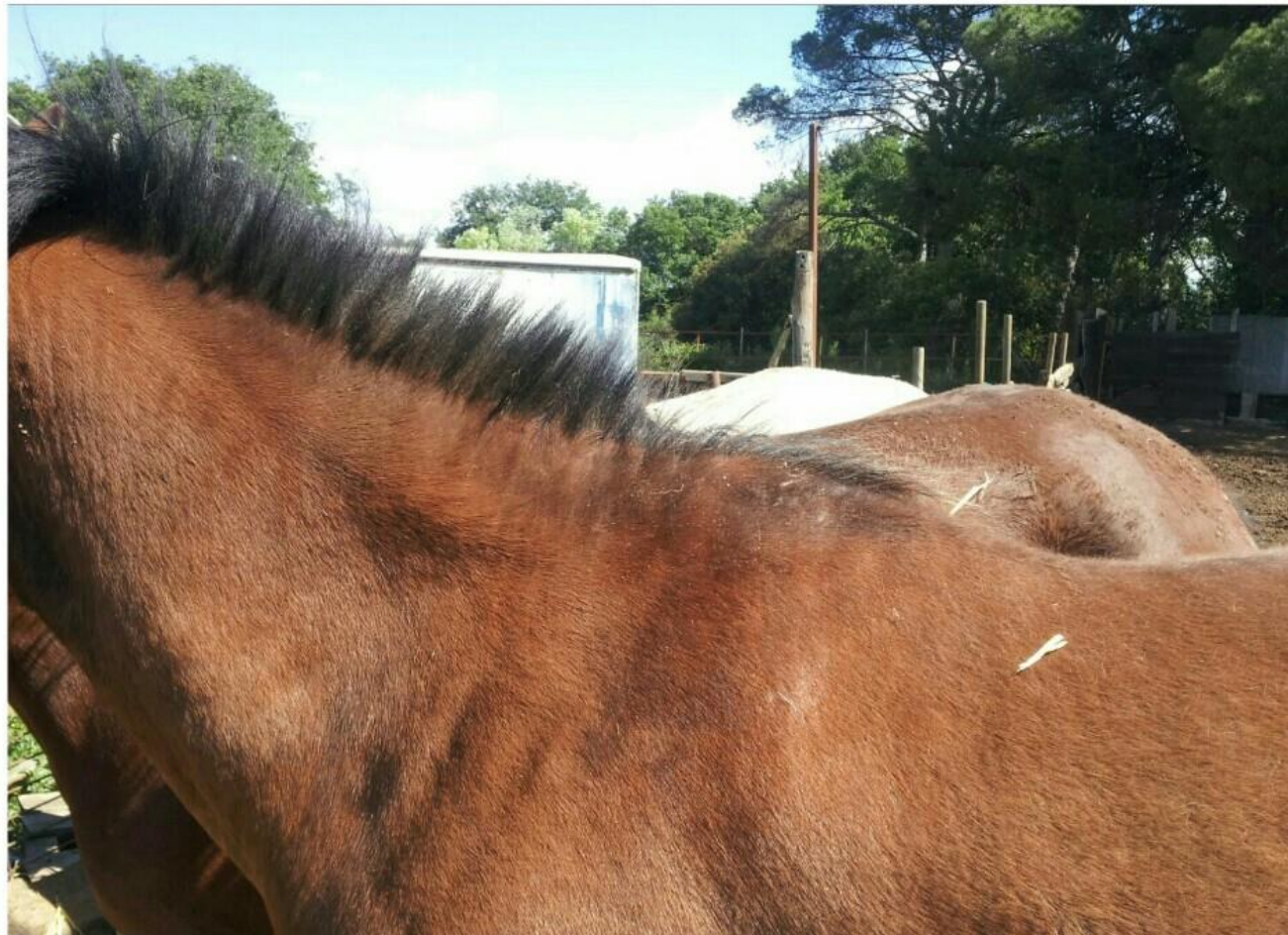


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	INTRODUCTION	
<p>Insect hypersensitivity is the most common allergic skin disease of the horse. The disease is caused by hypersensitivity to the bites of <i>Culicoides</i> species. Clinical evidence strongly suggests that this disorder has familial and genetic predispositions. Clinical signs are usually visible at the base of the tail and mane (<b>Pictures of the animals</b>). The usefulness of <i>allergen-specific immunotherapy (hyposensitization)</i> for treatment is unclear (<b>Scott and Miller, 2003</b>). The genus <i>Culicoides</i> in Spain has 81 described species (<b>Alarcon-Elbal and Lucientes, 2012</b>) of which 53 were found in Catalonia (<b>Talavera et al., 2011</b>).</p>		

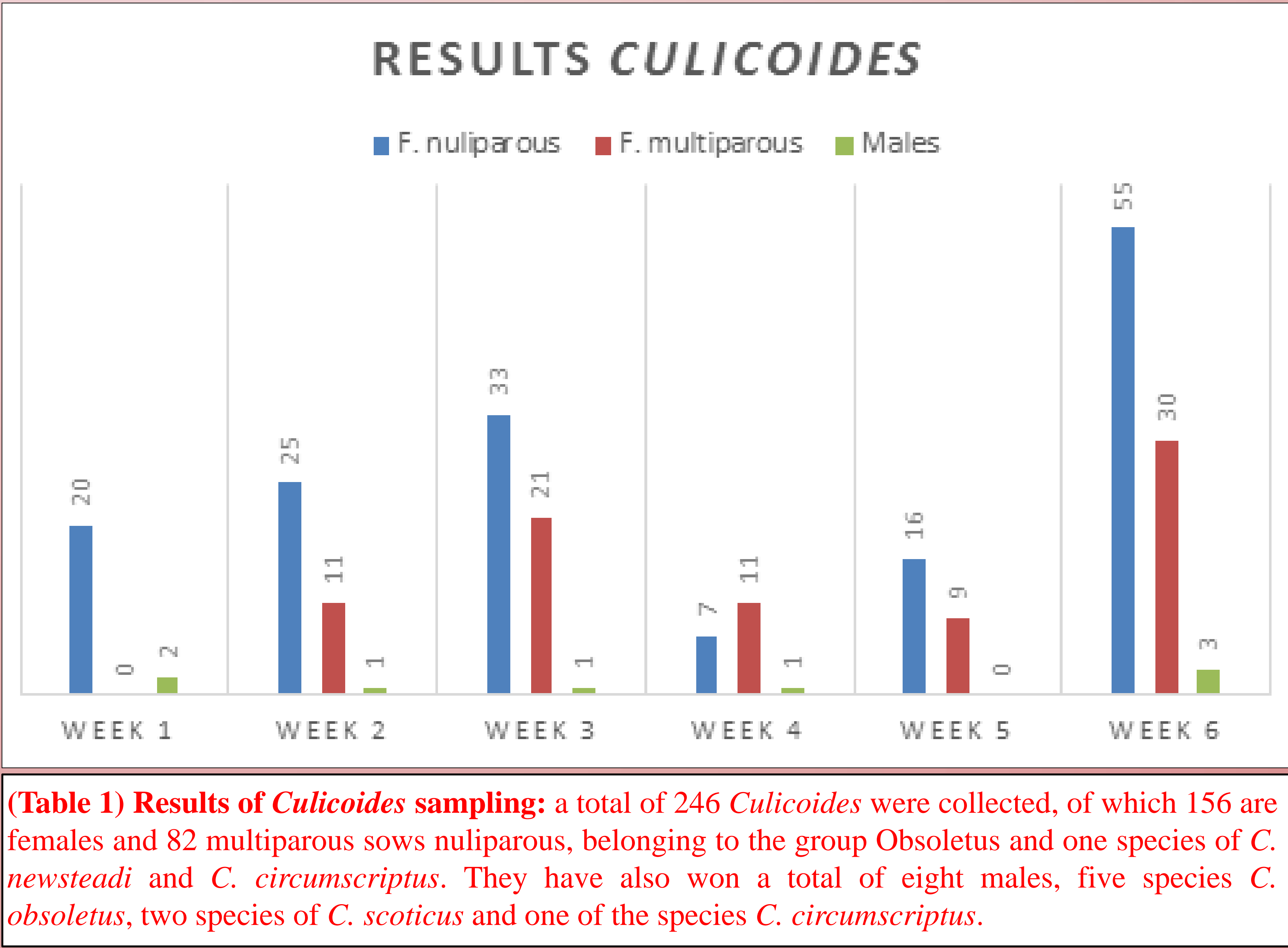
	OBJECTIVE	
<p><b>The main objective</b> of the study is the biological standardization of allergenic extract of <i>Culicoides nubeculosus</i> in hypersensitive horses, to find the appropriate dose for vaccine treatment.</p>		

	MATERIALS AND METHODS	
<p>The study was conducted in the town of Rodonyà (Tarragona). A CDC trap with ultraviolet light (model John W. Hock, Company) was placed in this area to recollect insects. Sampling was performed weekly. The presence of <i>Culicoides</i> species was assessed and subsequently sorted into three categories: males, nuliparous females and multiparous females.</p> <p>A total of 27 blood samples (October – May) were obtained from 21 animals with typical symptoms of the disease. Samples were then sent to the laboratory for serum testing to get specific diagnosis.</p> <p>ELISA assay was used to detect the presence of IgE antibodies in the blood of horses. We used an indirect ELISA, test plates composed of 96 wells containing antigen of <i>Culicoides</i> mosquito.</p>		



**(Pictures of the animals)** General symptoms of the animals of this study were pruritus at the base of tail and mane.

	RESULTS	
<p><b>The results obtained during six weeks were (Table 1) → 1 week:</b> 22 <i>Culicoides</i> (20 ♀ and 2 ♂) , <b>2 week:</b> 37 <i>Culicoides</i> (36 ♀ and 1 ♂), <b>3 week:</b> 55 <i>Culicoides</i> (54 ♀ and 1 ♂), <b>4 week:</b> 19 <i>Culicoides</i> (18 ♀ and 1 ♂), <b>5 week:</b> 25 ♀ and <b>6 week:</b> 88 <i>Culicoides</i> (85 ♀ and 3 ♂). The results of the samples obtained from 16 horses between October and December, 15 horses were negative and one animal was positive. The results of the samples collected in May 11 showed that horses were also negative <i>Culicoides</i>.</p>		



	DISCUSSION AND CONCLUSIONS	
<p>To diagnose animals with IBH it was needed both animals presenting evident clinical signs, as well as plenty of mosquitoes in the area of the animals included in the study. The best time to sample the affected animals would be warmer months (June-July), as it is the most active time of the mosquito. It also takes more time to get more samples from different regions. The results have been negative because it was not the best time to get samples as the animals did not show enough symptoms. IgE antibodies against antigens of <i>Culicoides</i> could only be detected in horses with clinically active insect bite and the profile of antibodies varies among animals (<b>Scott and Miller, 2003</b>).</p>		

	BIBLIOGRAPHY	
<ol style="list-style-type: none"><li>Alarcón-Elbal, P.M., Lucientes J., 2012. Actualización del catálogo de <i>Culicoides</i> Latreille, 1809 (Diptera, Ceratopogonidae) de España. Graellsia. 68(2), 353-362.</li><li>Scott, D.W., Miller, W.H ., 2003. Equine dermatology. Elsevier science (USA).458 - 467.</li><li>Talavera, S., Muñoz, F., Pagès, N., 2011. New insights on diversity, morphology and distribution of <i>Culicoides</i> Latreille 1809 (Diptera: Ceratopogonidae) from Northeast Spain. An Soc Entomol Fr. 47:214-231.</li></ol>		

