

annual precipitation, are very different from those of typical fascioliasis transmission foci, but even so, they are favourable for the maintenance and development of the life cycle of *F. hepatica*. This work was financed with funds of SECyT, from Universidad Nacional de Catamarca.

ZO-10. Surveillance on caprine brucellosis on herds of toba communities in Villa Río Bermejito, Chaco, Argentina (October 2010).

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The purpose of this surveillance was to evaluate the incidence of caprine brucellosis in herds of a region called "The Impenetrable" in Chaco Province, Argentina, in order to prevent the occurrence of the disease in people consuming goat milk. This was needed because of high levels of child malnutrition and difficulties in having access to high quality protein in this region. To this aim, we travelled with Patricia Sosa's foundation "Little gestures, big results" to Villa Río Bermejito, Chaco, in October 2010 with the laboratory equipment needed to carry out field tests. We took blood samples of 273 goats distributed in 11 herds established in the depth of Chaco dry forest, that had not been vaccinated against brucellosis. Samples were analyzed using the Buffered Plate Antigen test (BPA), confirming positive results with the Slow Agglutination Test (SAT). We found only one positive case with a titer of 1/50, that was considered suspicious and the owner was advised to take the animal off the herd. The foundation is integrated by many voluntary workers that include doctors of different specialties, dentists, experts in social issues, psychologists, etc., so they encouraged the community to consume goat milk included in different meals, after cooking or pasteurizing the milk in some cases to avoid contamination. We also medicated goats against parasites and with vitamin supplementation and identified the animals with small plastic caravans. Tuberculosis diagnosis was not possible because of the characteristics of the technique that needs to attend twice the locations that were in many occasions rather inaccessible. Nevertheless, tuberculosis is not a frequent infection in goats. Unfortunately, it was not possible to follow the evolution of these herds because of the difficulties in getting in touch with these communities due to social and political constraints. We think that the isolation of these herds in the depth of the forest has protected them from the occurrence of brucellosis and that they are a good source of high quality protein that is in great need to these people. We also think that the governmental institutions should pay close attention to the needs of these isolated communities in our country. We must emphasize the strong efforts that the foundation "Little gestures, big results" has been doing to improve the life conditions of autochthonous people living in the surroundings of Villa Río Bermejito, Chaco, Argentina. We truly appreciate the collaboration of VIA (Veterinarias Integradas de Argentina) and the veterinary community of Ameghino and General Villegas, Buenos Aires, Argentina; without them this surveillance would not have been possible.

ZO-11. First report of screwworm (*Cochliomyia hominivorax*) in wild boar (*Sus scrofa*).

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Wild boars (*Sus scrofa*) are Cetartiodactyla mammals introduced in many countries of the world and recognized as carriers of many infections and parasitic diseases. Also, *S. scrofa* is one of the 100 worst invasive species and one of the most relevant wildlife species related to human and livestock health problems. In 1920, pure Eurasian wild boars were deliberately introduced for recreational hunting in Colonia, Uruguay. As a result of releases and escapes, wild boars spread to the rest of the country (and even to Brazil) favored by its high adaptability to different environmental conditions, the absence of natural predators, its high reproductive rate and its omnivorous diet. Wild boar was declared a national pest in Uruguay and included in the pest

regulation of agriculture in 2004. The Ministry of Livestock, Agriculture and Fisheries must organize, and supervise the control measures of wild boars. Notably, the wild boar is affected by the same diseases as the domestic pig and plays an important role in the epidemiology of zoonotic diseases. Wild boar is one of the most relevant wildlife species for man health because its meat is consumed without previous sanitary controls. Also, it is responsible of negative impacts on agricultural production, wildlife and the environment. Livestock production represents an important percentage of the Uruguay economy. However, animal production has suffered significant losses because of the impact of endo and ectoparasites on livestock. Among the ectoparasites, the screwworm fly (*Cochliomyia hominivorax*) is an important cause of primary myiasis and is endemic in South America. Screwworm flies affect several animal species: wildlife and livestock. It is a transboundary disease. Its geographic distribution has been reduced through the implementation of the Sterile Insect Technique, being considered eradicated from the United States and Central America between 1950 and 2006. Currently, in Uruguay cases of myiasis by *C. hominivorax* are reported in production animals (mainly sheep and cattle) and less frequently in dogs and people. In wild animals despite mention of the occurrence of myiasis, there is no report of larvae identification. The aim of the present study was to evaluate and notify the presence of larvae of *C. hominivorax* in *Sus scrofa* hunted in Artigas, Uruguay. Through the Association of Wild Boar Controllers of Artigas, each hunted wild boar is given a general inspection to evaluate the presence of ectoparasites. In case of presence of ectoparasites, these are conserved in 70% ethyl alcohol and taxonomically classified by their morphological features. In 2017, three cases of *C. hominivorax* in *S. scrofa* were reported. This is the first systematic study in Uruguay to assess the presence of *C. hominivorax* in free-living wild boars. These results suggest that the wild boar could have an important role in the spread of myiasis larvae. In a changing ecosystem, systematic studies of wildlife are important. Moreover *S. scrofa* is the most important and widely distributed game animal species in the world. Finally, more studies are needed to understand the dynamics of myiasis among wildlife, livestock and humans.

ZO-12. Screwworm (*Cochliomyia hominivorax*) in humans: cases reported in 2017 in the departments of Salto and Artigas, Uruguay.

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Myiasis are tissue disorders or open cavities of livestock and humans produced by fly larvae. In Uruguay, the economic losses caused by the occurrence of myiasis by *Cochliomyia hominivorax* (screwworm) in production animals reaches hundreds of millions of dollars per year. *C. hominivorax* generates a rampant / traumatic primary myiasis of a zoonotic nature. According to projections of a study carried out in 2006 by the Ministry of Livestock, Agriculture and Fisheries, human myiasis in Uruguay (including Salto and Artigas departments) would reach 818 cases per year, affecting mainly rural workers and inhabitants. However, as myiasis is a disease which reporting is not mandatory, there are no updated accurate information on the situation in each department. The lack of information is explained because myiasis is a stigmatized zoonosis, without a specific treatment protocol. The aim of the present study was to identify and register human myiasis by *C. hominivorax* in the northeast of Uruguay. In 2017, four cases of human myiasis were reported in Artigas and Salto. Patient 1 was a 65 year-old man, living in the rural area of the department of Salto, who manifested a fluid process in the hard palate. Myiasis was confirmed in the oral cavity. Patient 2 was a 17 year-old woman of 17 years old, living in the rural area Artigas department, who went to the hospital because of occipital pain. A scalp lesion is observed verifying myiasis. Patient 3 was a 92 year-old man from Salto city, presenting an ulcerative lesion in the left parotid region with a diagnosis of parotid cancer. The test showed myiasis with abundant larvae. Patient 4 was a 62 year-old man living in Artigas city, who consulted the doctor because of pain in the occipital area. He had a deep cut in scalp where myiasis was verified. In all four cases larvae extraction was performed. They were placed in alcohol 70% and sent to the Cattle Service of Artigas for typing. Larvae were observed in stages I, II and III. Based on the morphology of the anterior and posterior spiracles, the cephalopharyngeal skeleton, the tracheal trunks, the segments with bands of spines and the

distribution of the spines in the anal tubers, it was determined that the larvae extracted from the four affected patients were *C. hominivorax*. It is considered necessary to carry out campaigns to raise awareness of the problem on a large scale and establish a treatment protocol, and also in a regional scale for the rural population and workers, including veterinarians. Also, it is necessary to generate a program of screwworm that will undoubtedly benefit the livestock economies and human health.

ZO-13. Surveillance of brucellosis and trichinellosis in feral swine in Uruguay.

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The wild boar (*Sus scrofa*) is one of the 100 most damaging invasive exotic species of the world. It was introduced from the Caucaso to Uruguay in the decade of 1920, in the department of Colonia (southwest of the country). As a result of loose or leaking they spread to the rest of the country and into Brazil, favored by their ability to adapt and the absence of natural predators. In the wild, it crossed with domestic pigs, increasing in size and aggressiveness. It was declared a national pest in 1982, authorizing free hunting, transport, commercialization and industrialization, and an agricultural pest in 2004, empowering the corresponding authorities to organize, supervise and oversee control measures. In 2011, an interdisciplinary and interinstitutional working group coordinated by the MGAP and the University of the Republic began a systematic health surveillance of the main diseases of economic and zoonotic importance of wild pigs. A convenience sampling was conducted between 2011 and 2017. Samples came from hunting events (Festival of the boar), hunters and veterinarians, both official and private, were collected with proper care and analyzed in laboratories of the Veterinary Laboratories Division of MGAP. For the diagnosis of *Brucella* sp., 225 blood samples from 12 departments out of 19 in the country were processed using the Rose Bengal test. For *Trichinella* sp., 156 diaphragm muscle samples from wild pigs of 7 departments were processed by artificial digestion. All samples gave negative results for *Brucella* sp. and *Trichinella* sp. This information is very important, since it allows to have a better knowledge of the diseases present in wild pigs and to establish appropriate control measures. In other countries with similar problems, prevalence in wild pigs vary from medium to high and human cases of both diseases have been reported.

ZO-14. Seroprevalence of antibodies against *Toxoplasma gondii* and *Neospora* spp. in Equids of Western Para.

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The present study aimed to determine the prevalence of antibodies against *Toxoplasma gondii* and *Neospora* spp. in equids raised for distinct purposes in the western state of Pará, Brazil, and to identify potential risk factors associated with parasite infection. A cross-sectional study was conducted with cluster sampling in 101 farms from 18 municipalities (farm horses). In visited cities, samples from sport and cart horses were included. Serum was obtained for detecting antibodies against *T. gondii* and *Neospora* spp. using indirect fluorescent antibody test, with cut-off values of 1:64 and 1:50, respectively. Association analysis, using the chi-square test, was performed to evaluate possible risk factors related to the prevalence of antibodies. A total of 1,298 equids were sampled (947 farm, 240 sport, and 111 cart horses), including 1,244 equines, 2 donkeys, and 52 mules. The number of animals sampled per property ranged from 1 to 49. Of the total examined, 134 (10.3%) had antibodies against *T. gondii*, and of the 18 municipalities visited, 11 (61%) had at least one positive animal. Seventy-three of the 1,298 animals (5.62%) from 44% of the municipalities tested positive for *Neospora* spp. The type of the animal (farm, sport, or cart horse) was