

---

## Muscular sparganosis in Eurasian wild boar (*Sus scrofa*) from southern Brazil

*Virginia Santiago Silva*<sup>1</sup>, *Raquel Rubia Rech*<sup>1</sup>, *Marcia Cristina Silva*<sup>2</sup>, *Luiz Carlos Bordin*<sup>1</sup>, *Carlos Henrique Salvador*<sup>3</sup>, *et al.*

<sup>1</sup> *Embrapa Swine and Poultry*

<sup>2</sup> *Centro de Diagnóstico de Sanidade Animal*

<sup>3</sup> *Instituto Javali Brasil*

In the last decade, Eurasian wild boars have been released into natural areas of Santa Catarina State, and adjacent forests have become one of the sources of this increasing population in Brazil. A 92 kg adult free living male was hunted and slaughtered for human consumption in the National Park of Araucária Forest (NPAF), Ponte Serrada municipality, western region of Santa Catarina State. While dressing the carcass, one flat slender white parasite was found on the surface of the psoas major muscle (pork tenderloin cut). The skeletal muscle containing the parasite were placed into 10% neutral buffered formalin and submitted to histologic examination. Microscopically, embedded in the adipose tissue attached to the skeletal muscle, there were multiple sections of a larval cestode, either surrounded by a capsule or a bundle of inflammatory infiltrate composed by epithelioid macrophages, numerous lymphocytes and plasma cells and fewer eosinophils, along with multifocal areas of hemorrhage and clusters of hemosiderin-laden macrophages. The parasite was classified into a plerocercoid larva (pseudophyllidian cestode) based on a solid body cavity, lack of digestive tract and scolex. The larva was composed of a thick, eosinophilic tegument with shallow invaginations. The loose solid parenchyma contained multiple carcereous corpuscles, muscle fibers arranged either parallel or haphazardly to the tegument, and excretory canals. Based on the morphologic features of the parasite, the diagnosis was non-proliferative sparganosis. Sparganosis is an infection of tissues in vertebrates hosts by second stage larva (spargana or plerocercoids) of pseudophyllidean tapeworms such as *Spirometra* spp. Adult tapeworms reside in the intestinal tract of definitive hosts (dogs and other carnivores). Vertebrate hosts, including human beings, become infected with spargana by: 1. ingestion of water containing copepod crustaceans (*Cyclops* spp.) infected with proceroids, 2. penetration of wounds or mucous membranes by spargana due to direct contact with the flesh of intermediate hosts, or 3. ingestion of spargana in intermediate hosts (paratenic hosts) such as frogs, snakes, birds, and some mammals including wild boar. At the NPAF, there is a highly diverse wildlife fauna, including several species of amphibians, reptiles, birds, mammals, and especially a large population of wild boar, an invasive species. This faunistic diversity, along with abundant local water resources and an increasing wild boar population, provides a proper environment for this parasite infection. People living in these areas are thus prone to infection through ingestion of contaminated water or uncooked infected meat. Since this is the first diagnosis of sparganosis in wild boars in Brazil, the consumption of this game meat may cause increased risk of a poorly known zoonosis in areas of wild boar population invasion. Consumers of wild boar meat should be familiar with the morphology of the parasite, because it may be mistaken for a small nerve or blood vessel. This work is part of a project to develop an action plan for control and health monitoring of wild boar population in Brazil, involving governmental and non-governmental agencies such as Embrapa, IJB, ICMBio, IBAMA and MAPA