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Invasive Record upon Texas Horned Lizard (*Phrynosoma cornutum*) with *Physaloptera phrynosoma* (Nematoda: Spirurida) in General Bravo, Nuevo Leon, Mexico

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A B S T R A C T

The Texas horned lizard (*Phrynosoma cornutum*) is a species that inhabits the desert regions in northern Mexico and south of United States, this species feeds mainly on ants, meanwhile *Physaloptera phrynosoma* is a helminth primarily located in the stomach of their hosts (*P. cornutum*). The ants are consider as an intermediate host of *P. phrynosoma*, and a massive infestation of this helminth can interfere with the normal function of the digestive mechanism in horned lizards. In this note is recorded the invasive presence of *P. phrynosoma* in the stomach contents of a dead individual of Texas horned lizard in Mexico.

Introduction

The studies on parasites in reptiles are poor in northern Mexico, and information on hyperparasitosis is limited, for this reason, the present report is an important contribution to know the parasite and its hosts. The family Physalopteridae contains a large number of species which occur commonly in reptiles (Olsen, 1974; Quiroz-Romero, 2005; Hilsinger *et al.*, 2011), birds, and mammals, but only rarely in amphibians (Olsen, 1974). They are relatively large worms with thick bodies and attach to mucosa of the stomach or intestine (Olsen, 1974). *Physaloptera phrynosoma* is a

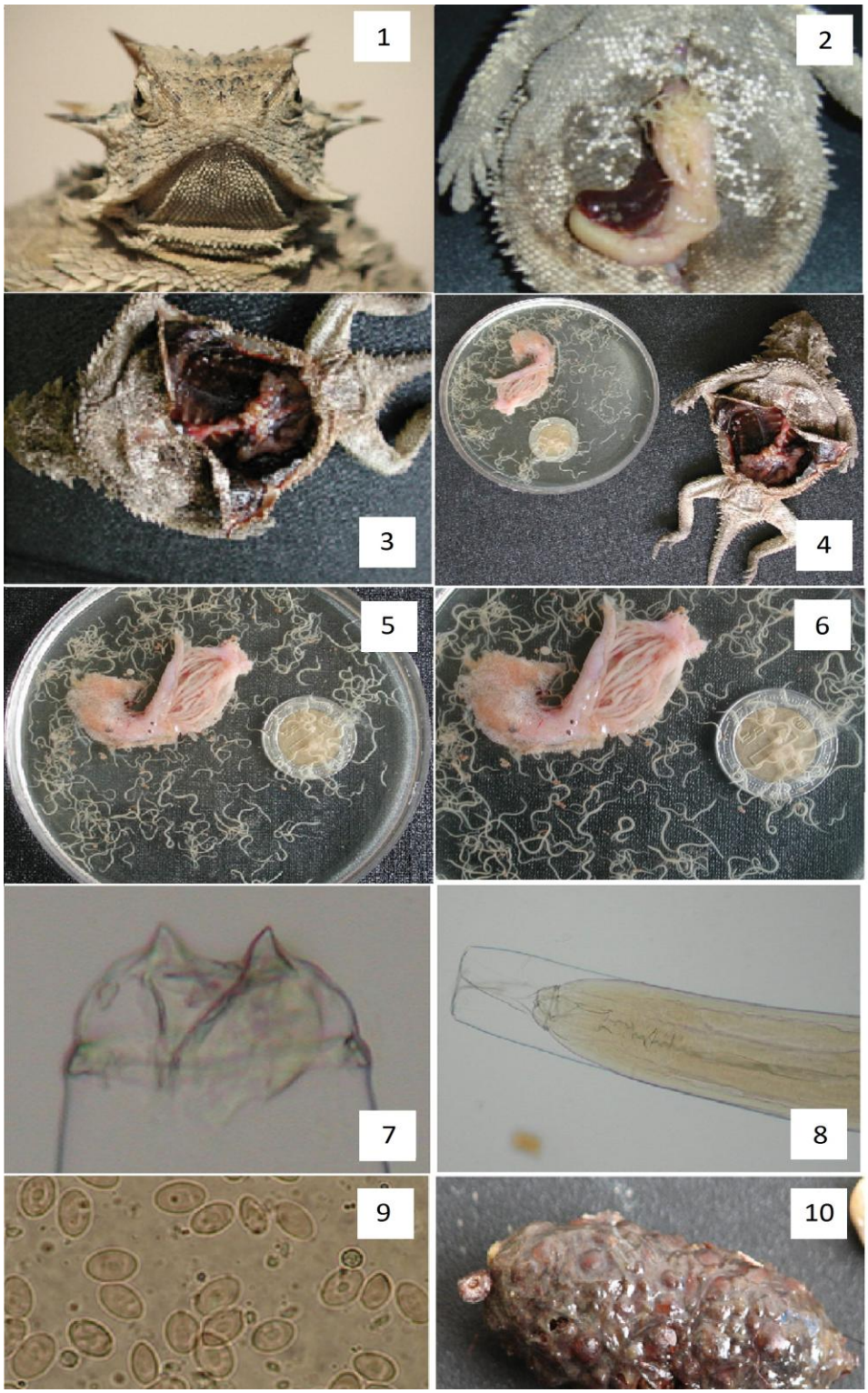
common parasite of the stomach of Texas horned lizard (*Phrynosoma cornutum*) from the arid regions of the southwestern parts of the United States and similar areas in Mexico (Olsen, 1974).

Phrynosoma cornutum is a flat-bodied lizard with white midback stripe; two rows of lateral fringe scales; dark lines going up face and over top of head; sharp spines over eyes; two occipital horns pointing upward (Behler and King, 1992; Sherbrooke, 2003). *P. cornutum* prefers open, dry, sand, rocky or clay loose substrate, dominated by grasslands, mesquite and cactus in desert areas, but vegetation cover is sparse (Behler and King, 1992; Conant and Collins, 1998). *P. cornutum* has constituted between 85% and 69% of their diet by ants, and has been observed in adults and juveniles who prefer ants of the genus *Pogonomyrmex*. Ants are hunted stalking the entrance to their nests, columns over foraging for ants and in open areas, each individual can consume 30 to 100 ants or more per day (Degenhardt *et al.*, 1996). The diet can also be constituted by beetles, grubs, grasshoppers, termites and bedbugs species (Milstead and Tinkle, 1969). Lee (1975) realize a job to reproduce the life cycle of *Physaloptera phrynosoma* one of the most common parasites, which affects *Phrynosoma spp*, this author proposes their work product that ants are the intermediate host of this parasite. This paper describes a case of massive parasitism by *Physaloptera phrynosoma* upon a female *Phrynosoma cornutum*.

During an occasional field trip in the municipality of General Bravo, Nuevo Leon, Mexico, to collect feces of *Phrynosoma spp.* During the summer of 2011 at 1200 hrs, a death adult female of Texas horned lizard (*P. cornutum*) was taken for study to the Laboratory of Parasitology (Laboratorio de Parasitología), Faculty of Veterinary Medicine and Animal Husbandry (Facultad de Medicina Veterinaria y Zootécnia) of the Universidad Autonoma de Nuevo Leon. The necropsy was performed, at specimen collected at the gastric level found the presence of a total of 494 parasites of different sexes and developmental stages warned. Parasites obtained were rinsed in Amman lactophenol and then observed under a microscope, including the following features that define the genus and species such as: by its location at the gastric level, by the presence of excess cuticle in both ends of the body, by the presence of Pseudolips with three pairs of teeth on its margins, because in the case of males presented asymmetric spicules, and by the presence of larval eggs (Olsen, 1974; Quiroz-Romero, 2005) (Fig. 1).

According with the infection range mentioned by Barbero and Kay (1967) is consider as moderate from 100 to 350 worms, and heavy from 351 to more than 1,100 worms, which means that our individual present a heavy invasion of this worm with 494 individuals. Also Woodbury (1934) mentioned that would be probably that such heavy infections could interfere with normal food storage and the digestive mechanism that could be a reason of the observation of this animal dead in the field. We recommend realize more studies about this parasite that permit to evaluate the effect of this species over the population of the Texas horned lizard (*P. cornutum*).

Figure.1 Images of the dissection of the stomach content in Texas horned lizard, in General Bravo, Nuevo Leon, Mexico. Legend: 1-Frontal position of the lizard; 2-Ventral dissection of the lizard; 3-Removal of stomach; 4-Petri dish and ventral observation of the lizard; 5 and 6-Photo of *P. phrynosoma*; 7-Anterior portion of the nematode; 8-Posterior portion of the nematode; 9-Eggs of *P. phrynosoma*; 10-Feces of Texas horned lizard with rests of the ants



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