

# A New Species of Thelastomathidae (Nematoda) a Parasite of *Neocurtilla claraziana* Saussure (Orthoptera, Gryllotalpidae) in Argentina

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*Gryllophila cephalobulata* n. sp. (Nematoda, Thelastomatidae) a parasite of the mole cricket *Neocurtilla claraziana* (Orthoptera, Gryllotalpidae) isolated in Buenos Aires Province, is described and illustrated. It is characterized by cuticle annulated all along the length of the body; the first ring has 4 lobules, the second one has 14 lobules, the others rings are simple, the stoma is short and has 4 small teeth, the genital papillae are arranged in 5 pairs, of which 3 pairs are preanal and 2 pairs are postanal. The tail appendage of the male is long and filiform.

Key words: Thelastomatidae - *Gryllophila cephalobulata* n. sp. - mole cricket - taxonomy - Argentina

The genus *Gryllophila* was proposed by Basir in 1942, with the type species *G. gryllophila*, having been recovered from a mole cricket. Sergiev (1923) described another nematode from *Gryllotalpa* in Russia, *Thelastomum skrjabini*; it appears to be identical to *G. gryllophila*, so the type species of this genus became *Gryllophila skrjabini* (Sergiev, 1923) n. comb. Serrano Sanchez (1947) described in Spain the species *Neyraiella neyrae*, a parasite of *Gryllotalpa*, but she erroneously observed 2 spicules in the male, and it is synonyms with *G. skrjabini*. This single species of the genus was found in Russia, India, France, Spain, and Brazil. In this paper we report a second species, *G. cephalobulata* n. sp., found in the mole cricket *Neocurtilla claraziana* Saussure in Argentina.

## MATERIALS AND METHODS

Adults of *N. claraziana* Saussure from Gorina, La Plata, Buenos Aires Province, Argentina, were collected by hand and then placed in individual vials. Using Poinar's (1975) techniques, the insects were kept at 5°C for 10 min, and then dissected in Petri dishes filled with distilled water under a stereoscope microscope. The nematodes were killed by placing them in distilled water at 60°C for 2 min. They were removed to 50% TAF solution in water for 48 h, then into pure TAF. The nematodes were transferred from the fixative to glycerol for slow evaporation of it and clearing of the parasites. Fixed specimens were used for drawings and measurements with the aid of a lucida camera mounted on a Zeiss compound microscope. All measurements are in  $\mu\text{m}$ , with ranges in parenthesis.

## RESULTS

*Gryllophila cephalobulata* n. sp. (Fig. 1 A-G)

*Description*: small nematodes, males much smaller than females. Mouth opening sub-triangular surrounded by 8 lip papillae. Cuticle annulated all along the body, the first ring has 4 lobules, the second one has 14 lobules, the other rings are simple. The stoma is short and has 4 small teeth. Oesophagus consisting of a corpus, an isthmus and a valvated basal bulb. Excretory pore is far behind the base of the oesophagus. Vulva protruding and situated in the posterior third of the body. Vagina long and cylindrical. Didelphic. Egg oval, with smooth shell, covering with a membrane uterine. Tail appendage of female short and conical. Male with a single spicule. The genital papillae arranged in 5 pairs, of which 3 pairs are preanal and 2 pairs are postanal. Tail appendage of the male is long and filiform.

*Male* (n = 12) body length: 907  $\mu\text{m}$  (845-980); width of the head at level of the mouth: 10.2  $\mu\text{m}$  (9.4-12); oesophagus length: 89.3  $\mu\text{m}$  (85-92.4); distance from anterior end to excretory pore: 103.4  $\mu\text{m}$  (97.8-112); greatest width of body: 44.6  $\mu\text{m}$  (42.2-52); spicules length: 19.5  $\mu\text{m}$  (18.8-21.2); tail appendage length: 61.1  $\mu\text{m}$  (59.6-65.4).

*Female* (n = 15) body length: 1610  $\mu\text{m}$  (1430-1800); width of the head at level of the mouth: 21.1  $\mu\text{m}$  (20.4-23.6); oesophagus length: 289  $\mu\text{m}$  (260-296.5); distance from anterior end to excretory pore: 306  $\mu\text{m}$  (302.2-321.9); width of body at level of vulva: 101.1  $\mu\text{m}$  (100-106.4); greatest width of body: 98.7  $\mu\text{m}$  (96-99.2); vagina length: 124.5  $\mu\text{m}$  (122-126.6); V: 77% (76-78.2); length and width of eggs: 25  $\mu\text{m}$  (24.3-25.8) x 11.7  $\mu\text{m}$  (11-12.2); tail appendage length: 199.7  $\mu\text{m}$  (196-200.2).

*Type host*: adults of *N. claraziana* Saussure (Orthoptera: Gryllotalpidae).

*Type locality*: Gorina, La Plata, Buenos Aires, Argentina  
*Site in host*: intestine

*Type material*: deposited in the Helminthological collection of Museo de Ciencias Naturales de La Plata, no. 4858.

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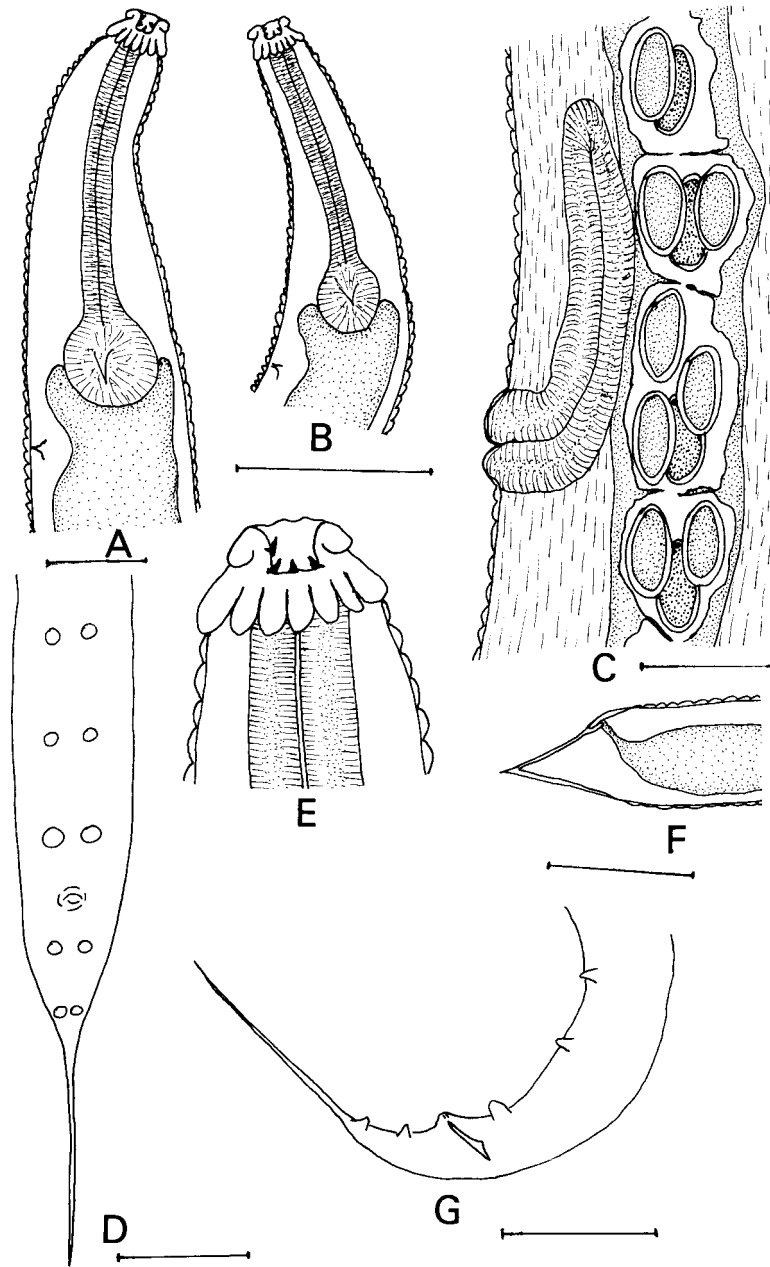


Fig. 1: *Gryllophila cephalobulata* n. sp. - A: anterior end of female, ventral view; B: anterior end of male, ventral view; C: vagina and eggs; D: posterior end of male, ventral view; E: stoma of female; F: posterior end of female; G: posterior end of male, lateral view. Bars = 50  $\mu$ m

**DISCUSSION**

*G. cephalobulata* n. sp. is very similar to *G. skrjabini* in having the body annulated throughout its length, the stoma short and cylindrical, the excretory pore is posterior to the base of the oesophagus, the intestine is dilated anteriorly, the vulva is in the posterior third of the body, the eggs are inclosed in a tubular structure into the uteri, the male has one spicule.

*G. skrjabini* can be separated from our new species in having the first and second rings of the cuticle without lobules, the stoma has no teeth, the vulva is not protruding, the male with 3 pairs of genital papillae, of which 1 pair is preanal and 2 pairs are postanal, and the tail appendage of the male is short.

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