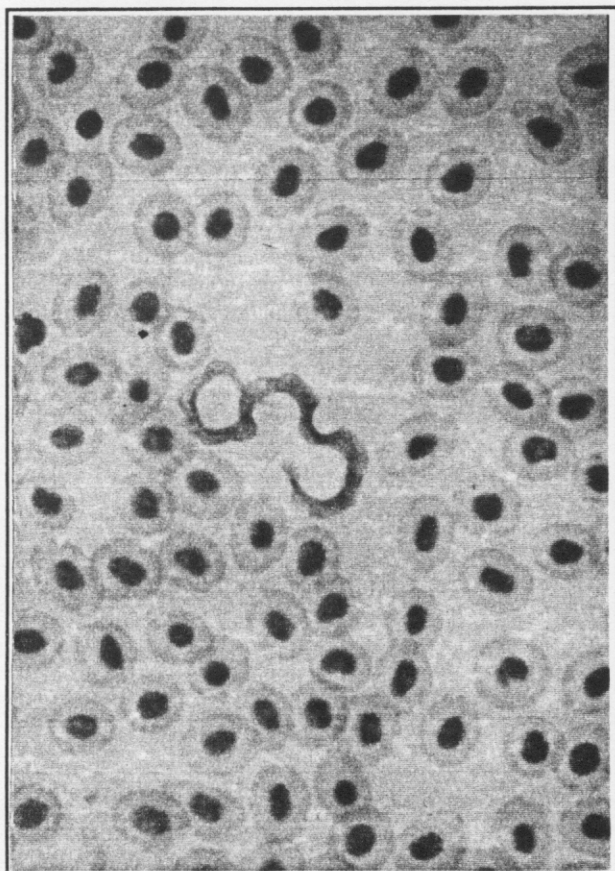




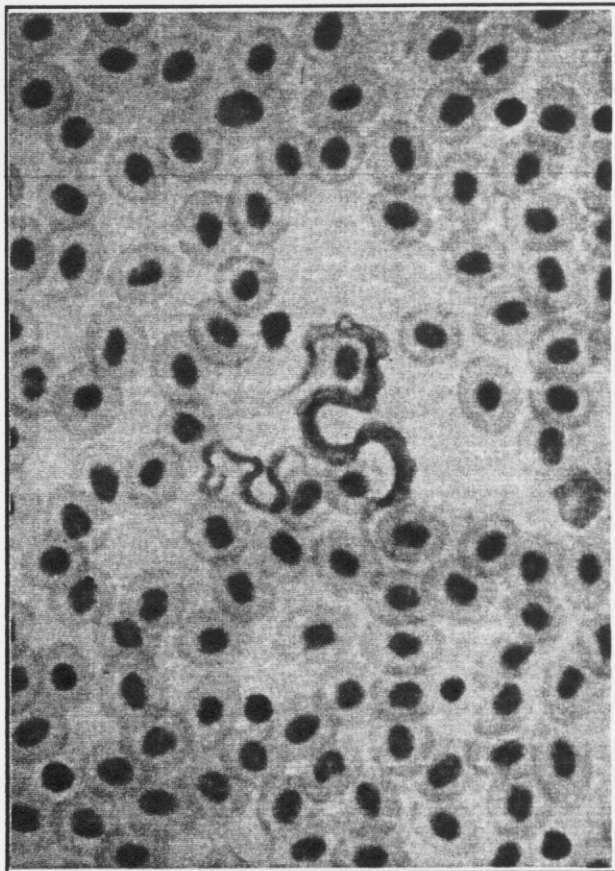
ABRIR 7.- BIBLIOGRAFÍA

FOTOGRAFÍAS

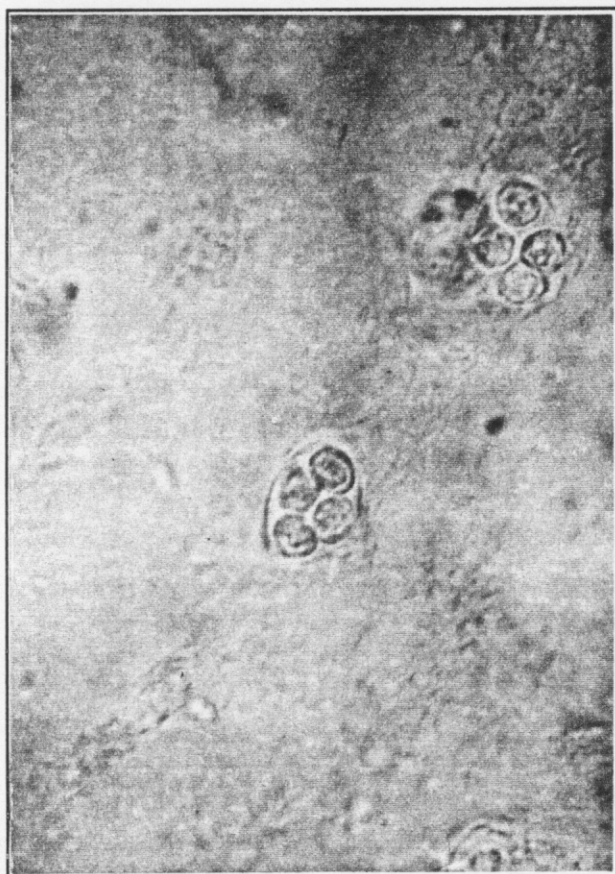
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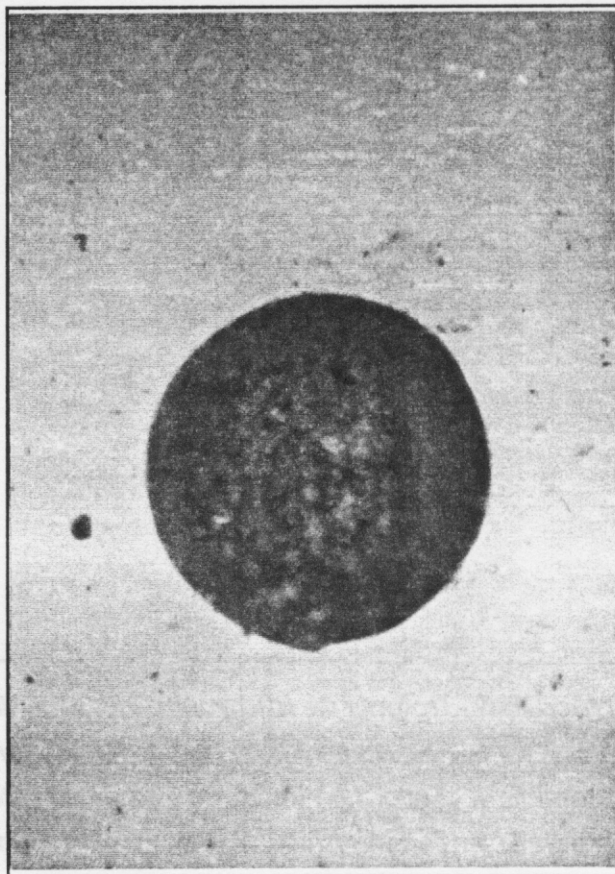
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Fotografia 2



Fotografia 3



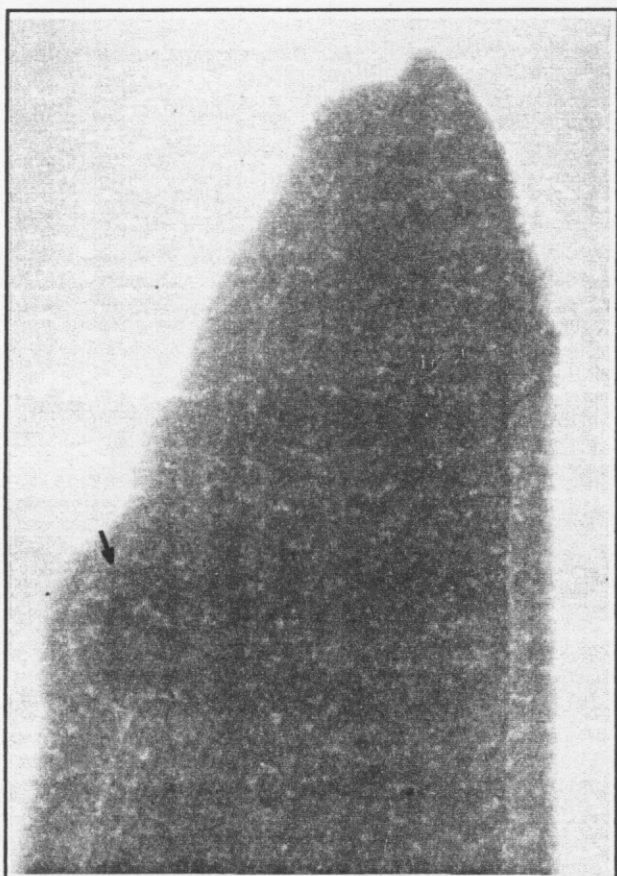
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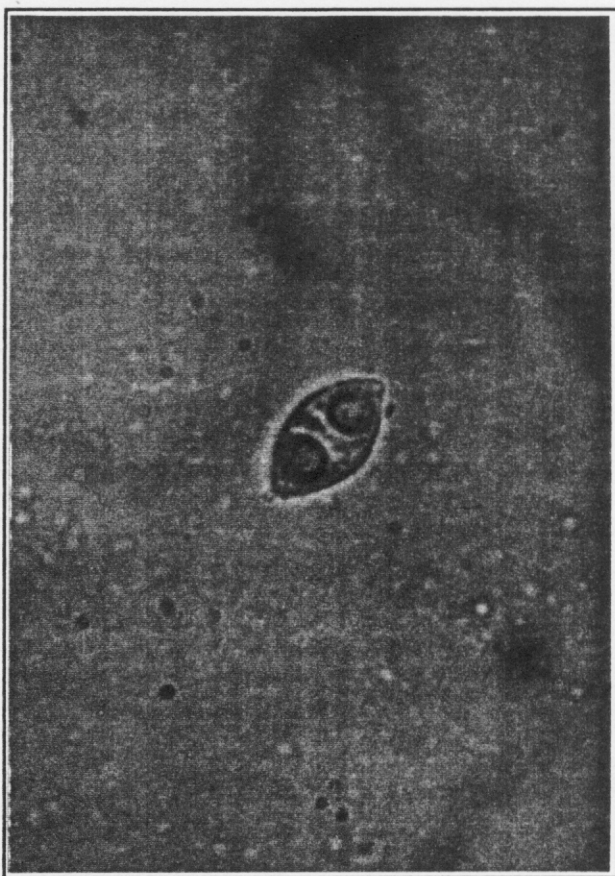
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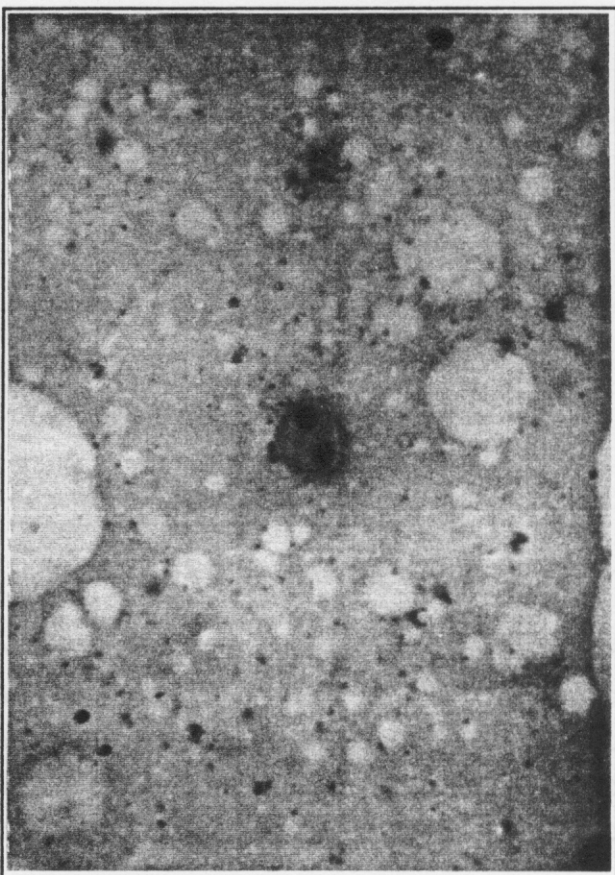
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Fotografia 6



Fotografia 7



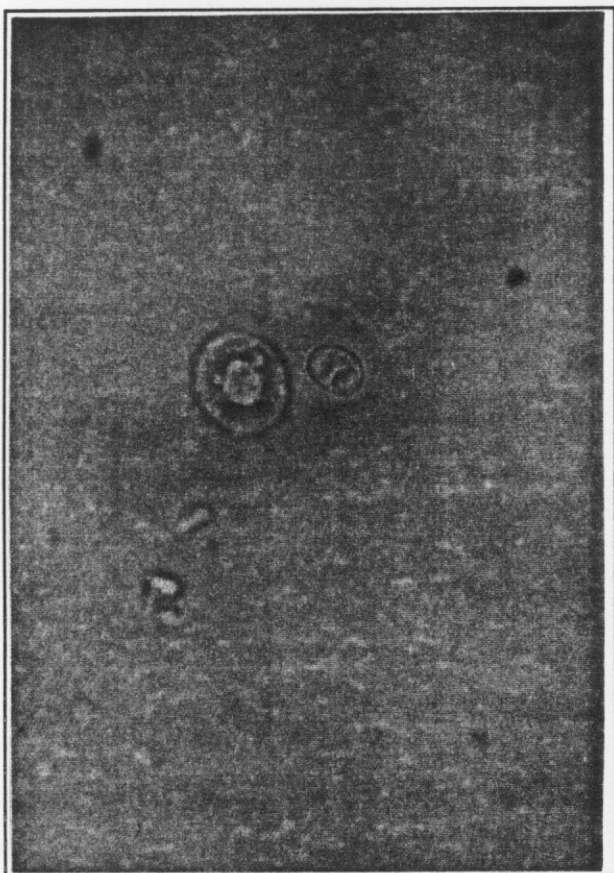
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Fotografía 9.- Espora en fresco de *Neomyxobolus* sp. 2.800x

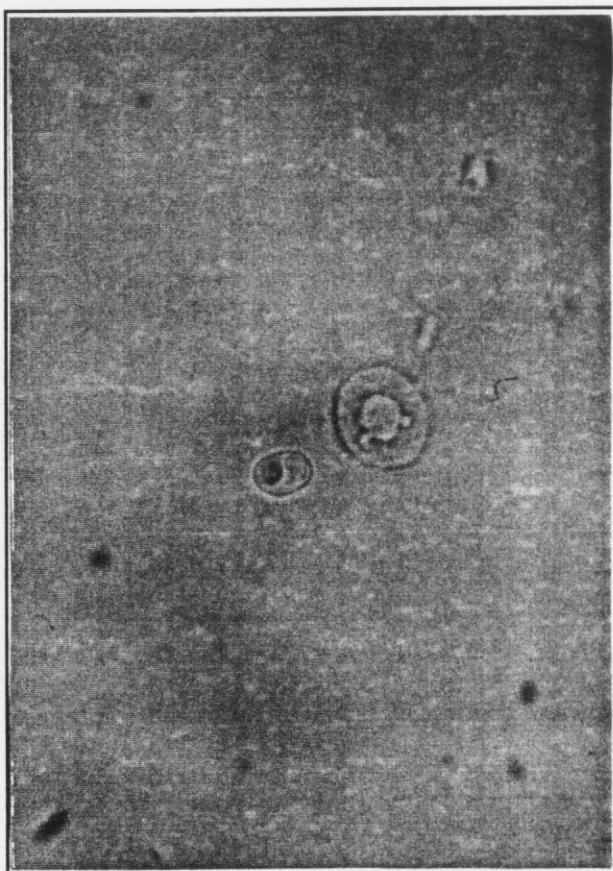
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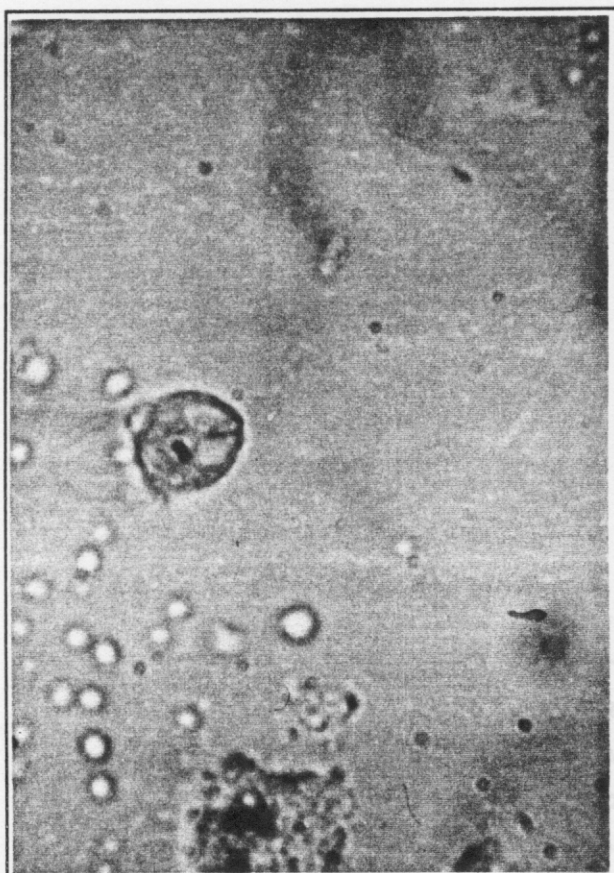
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Fotografia 10

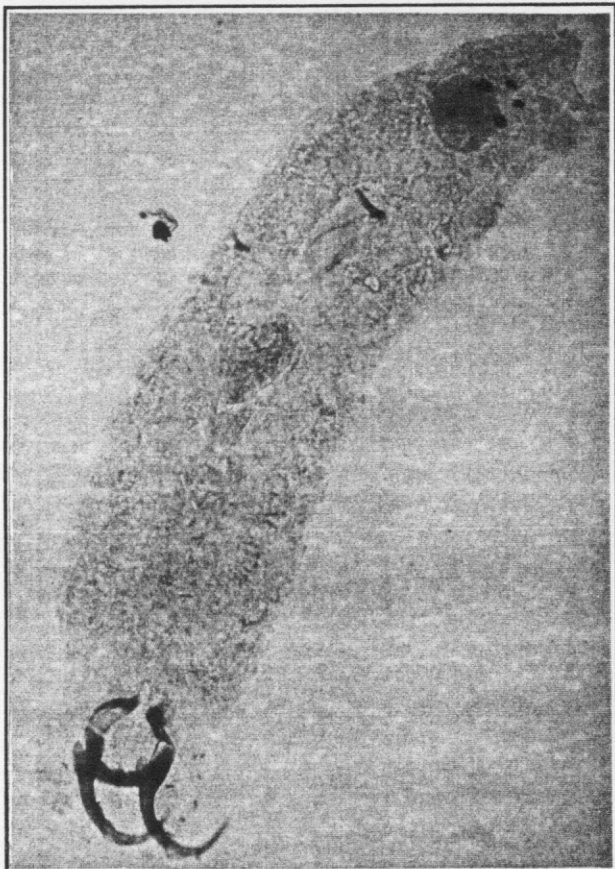


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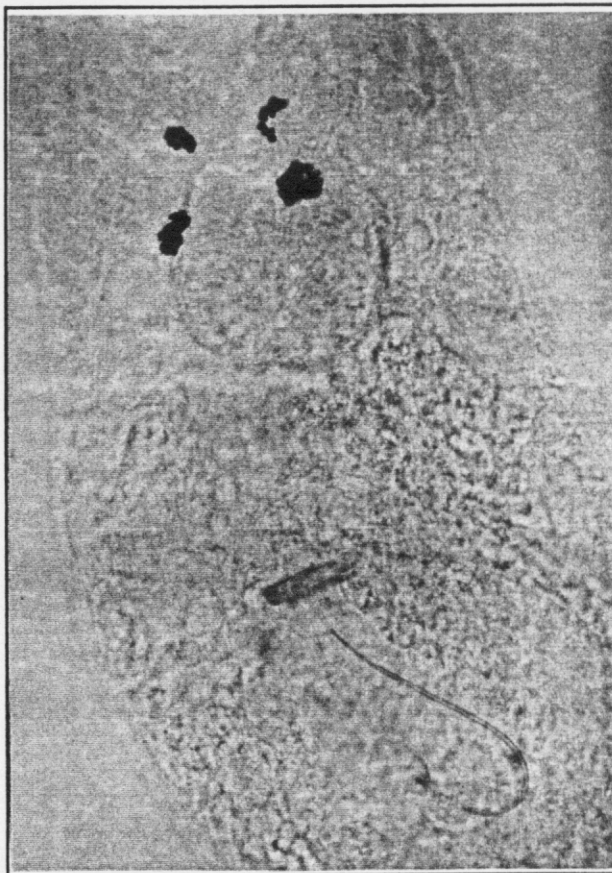


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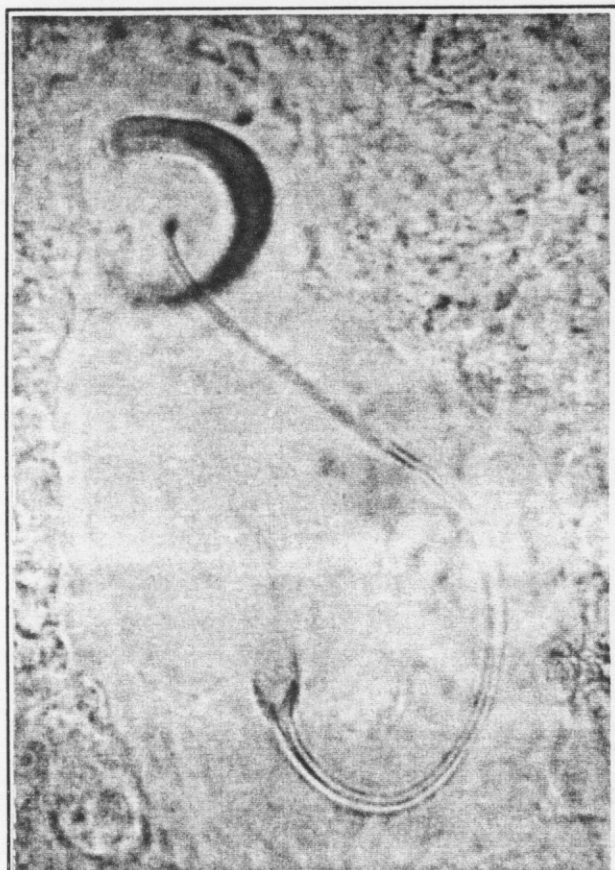
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- Fotografía 13.- Vista general de *Pseudodactylogyrus anguillae*. 400x
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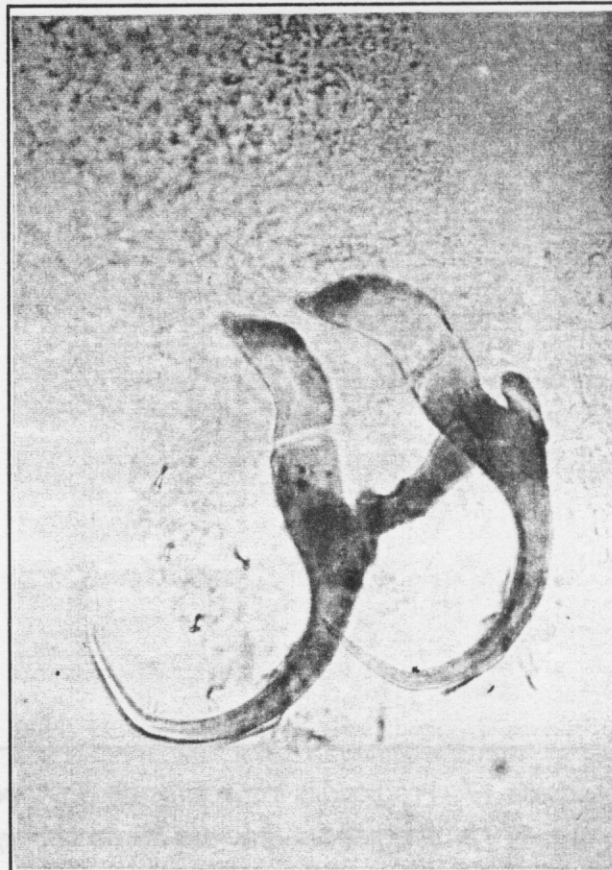
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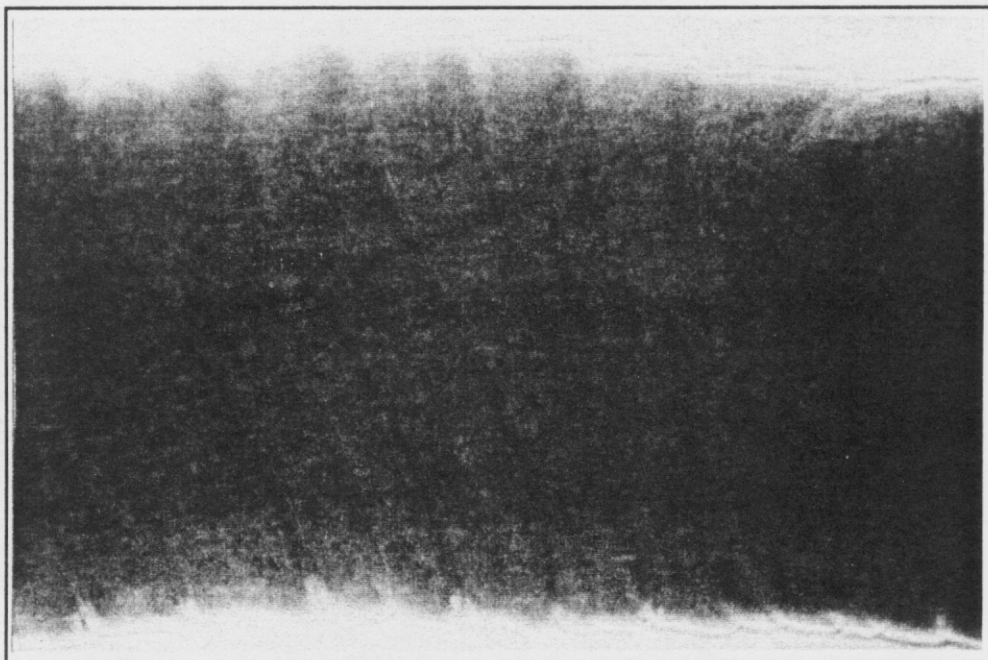
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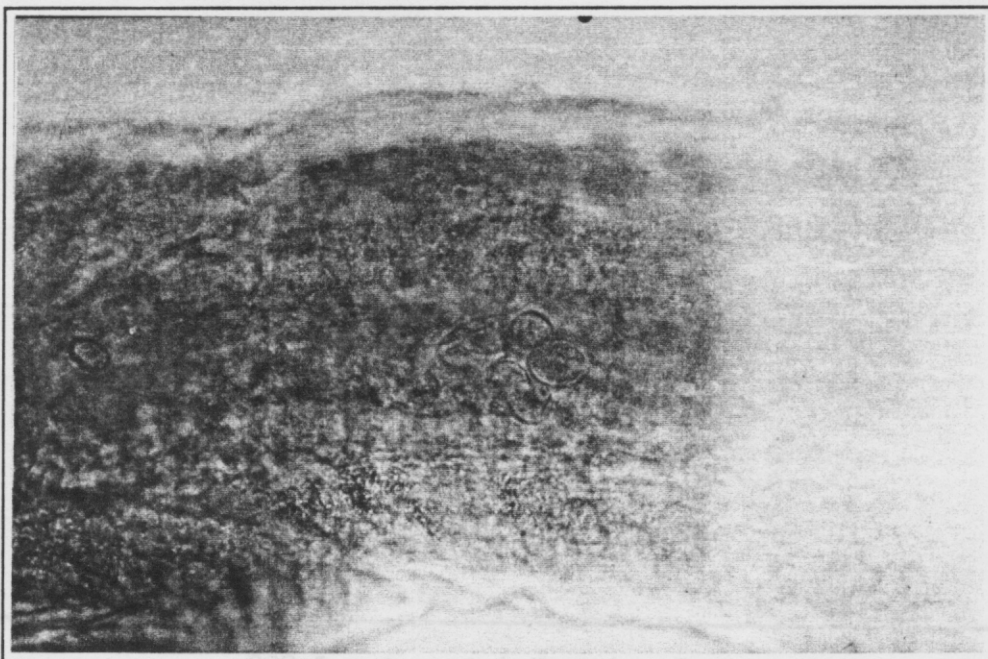
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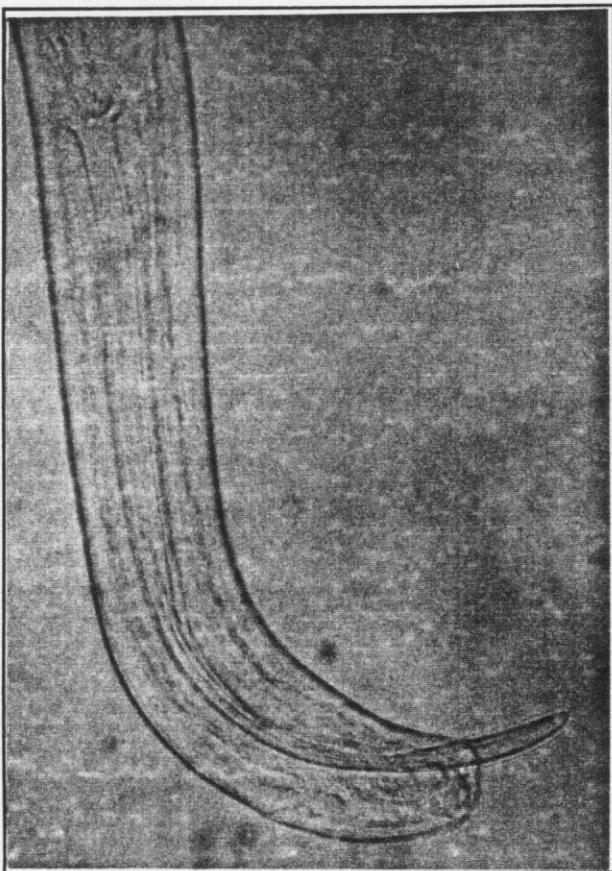


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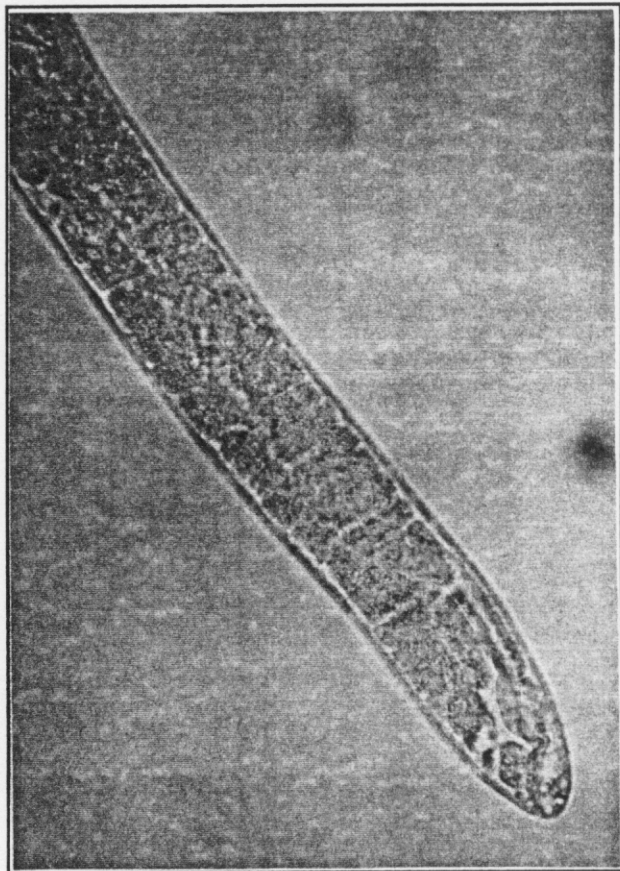
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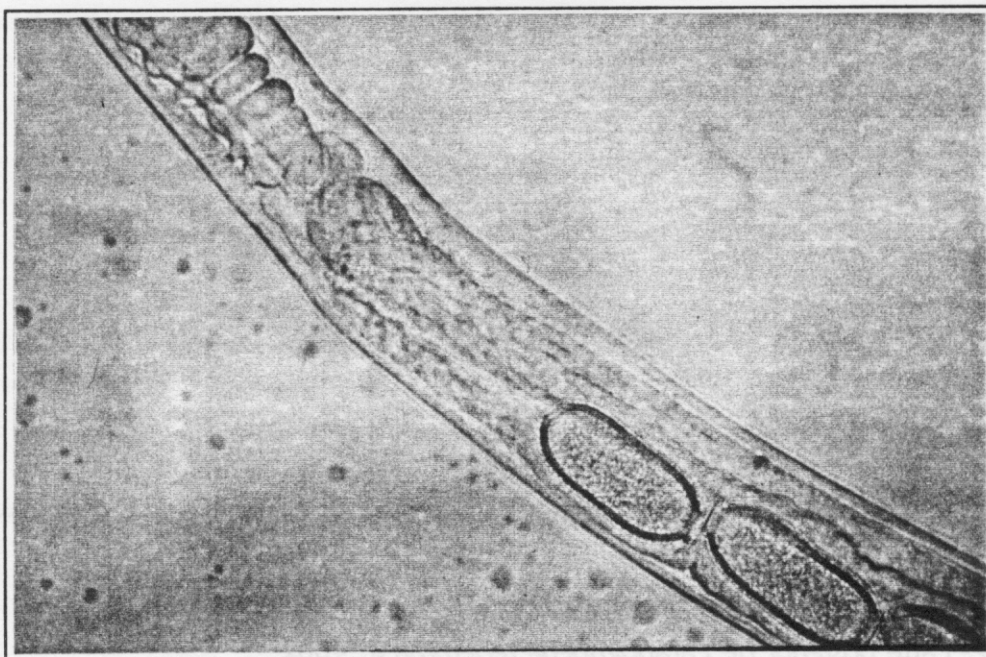
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Fotografía 19

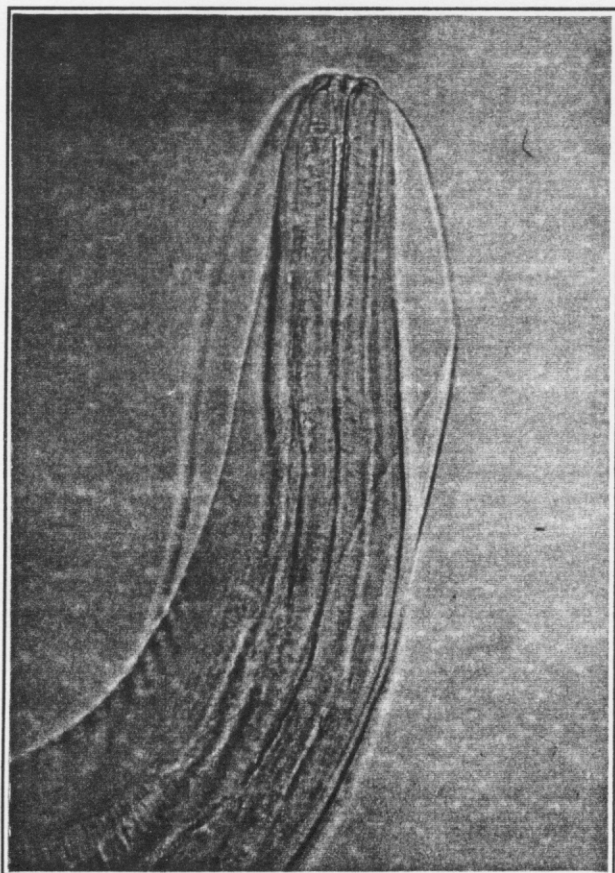


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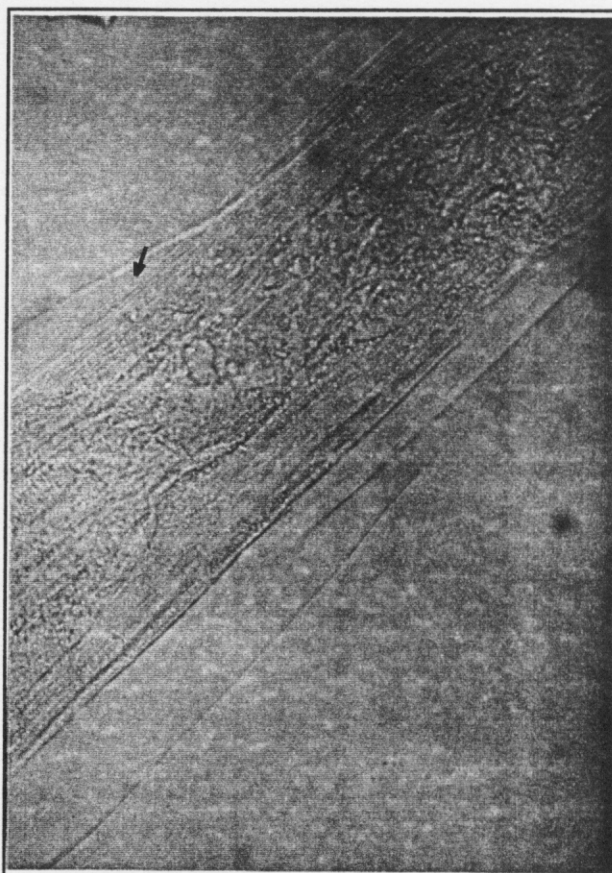


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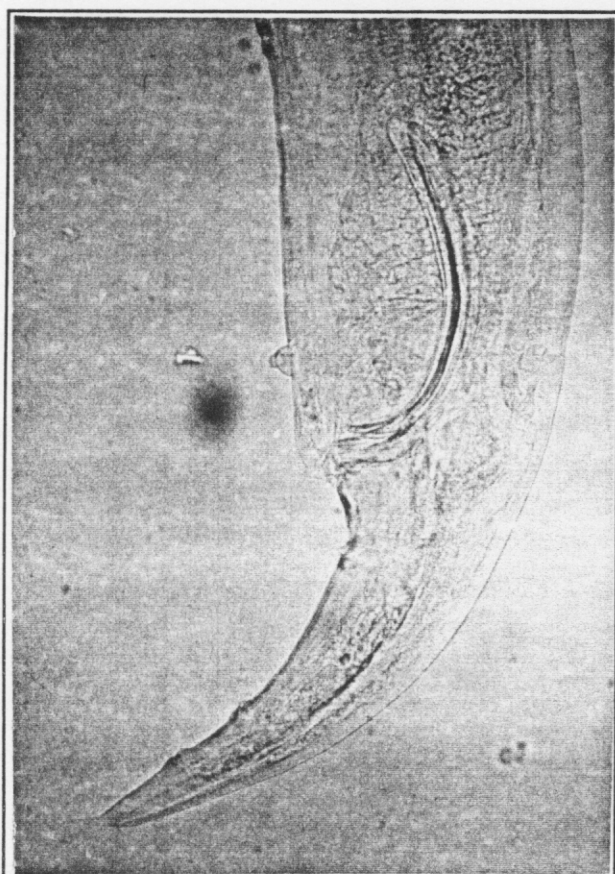
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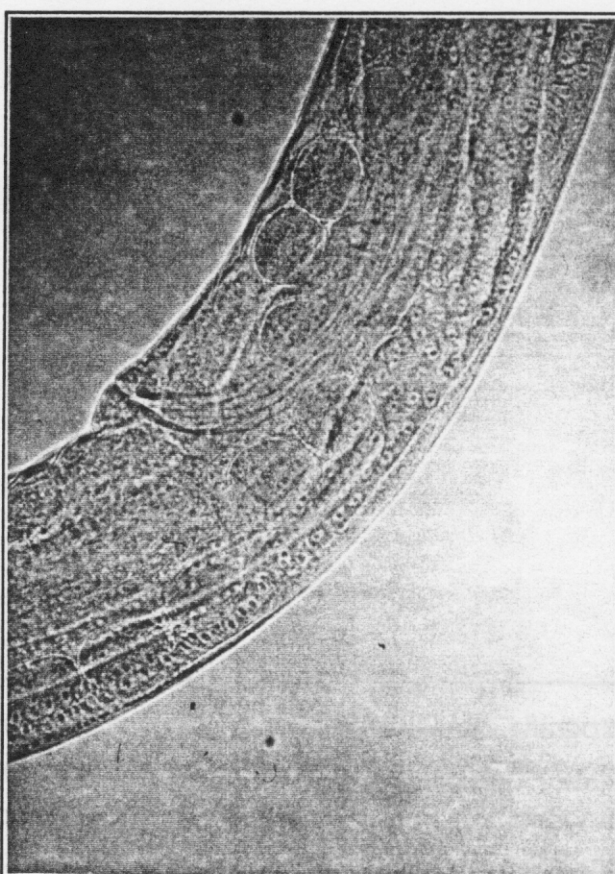
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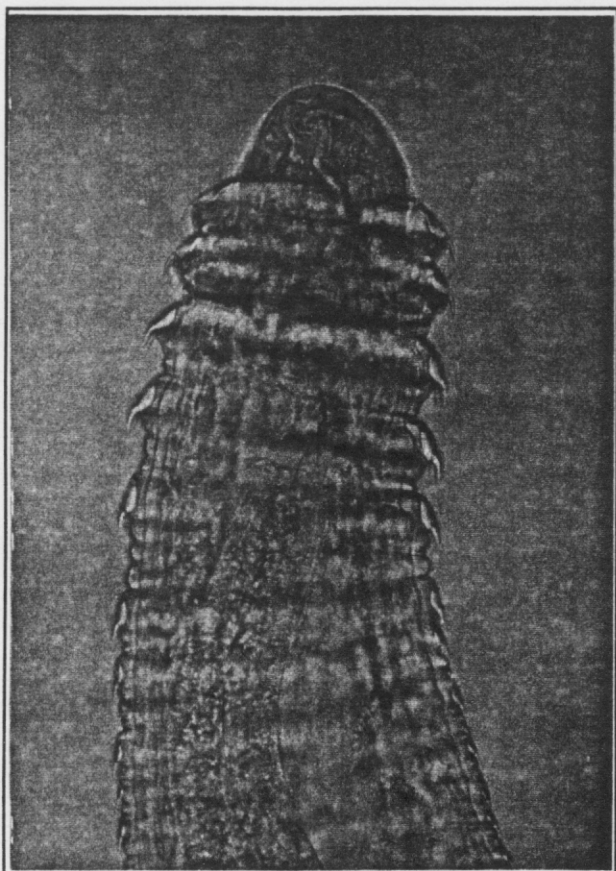
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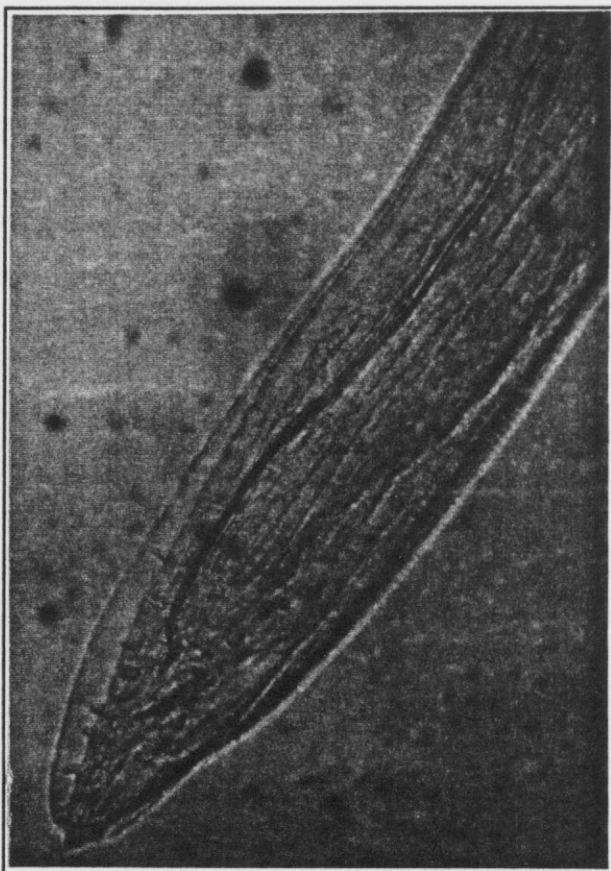
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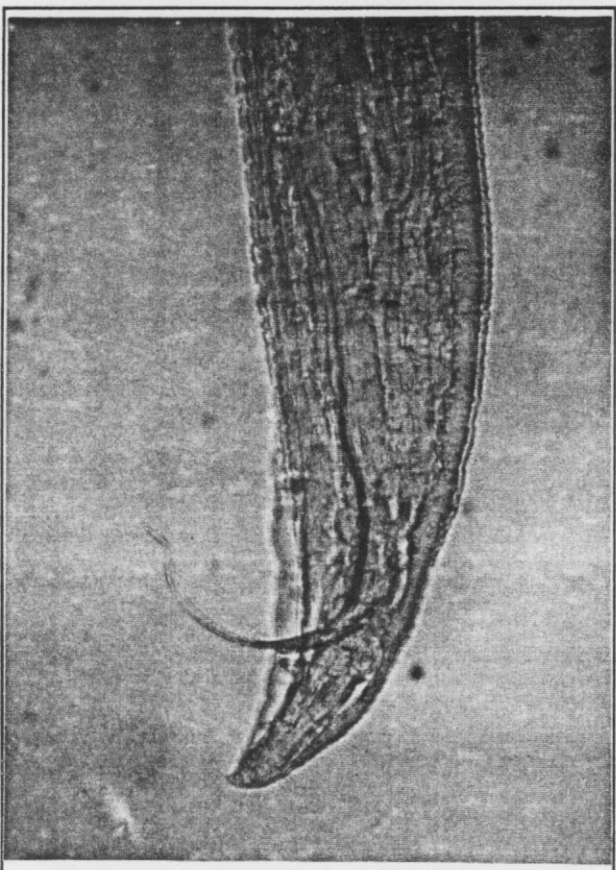
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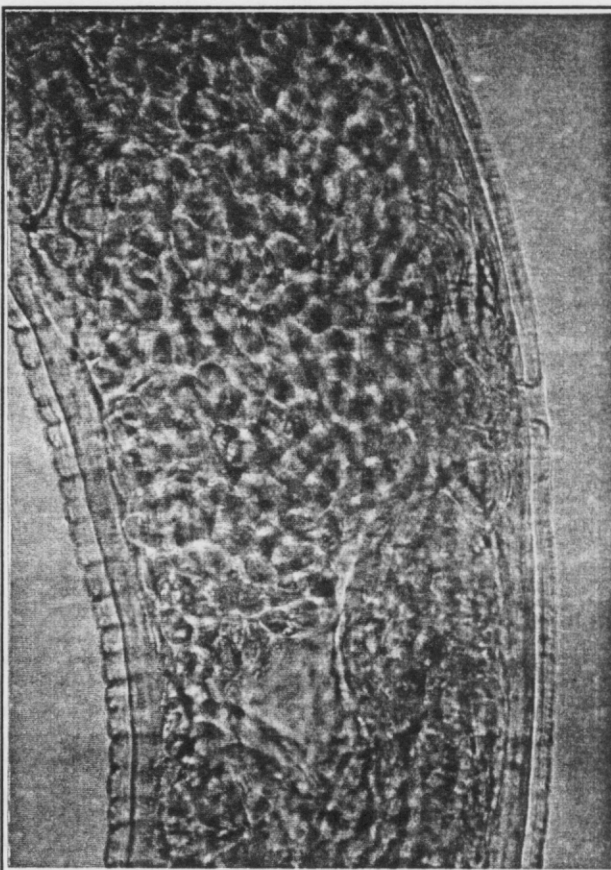
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Fotografia 28



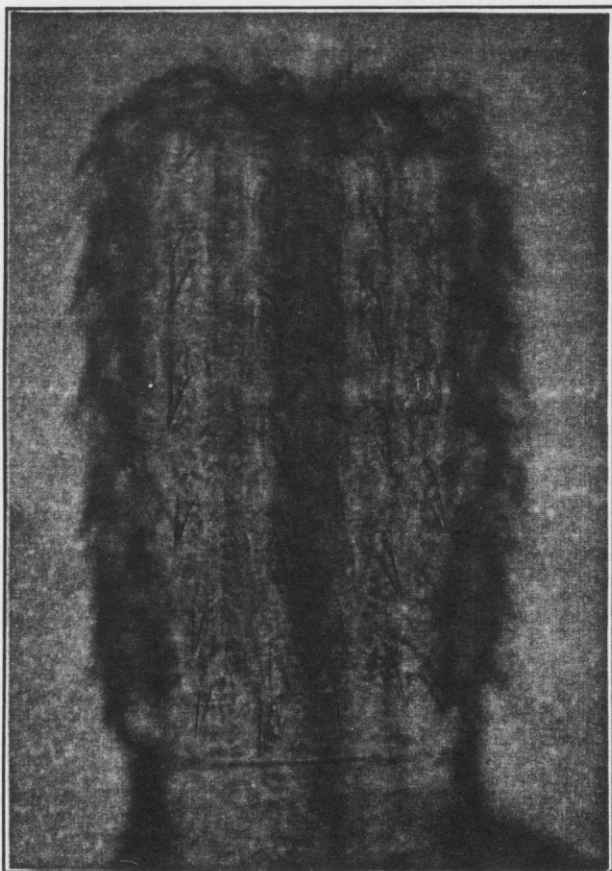
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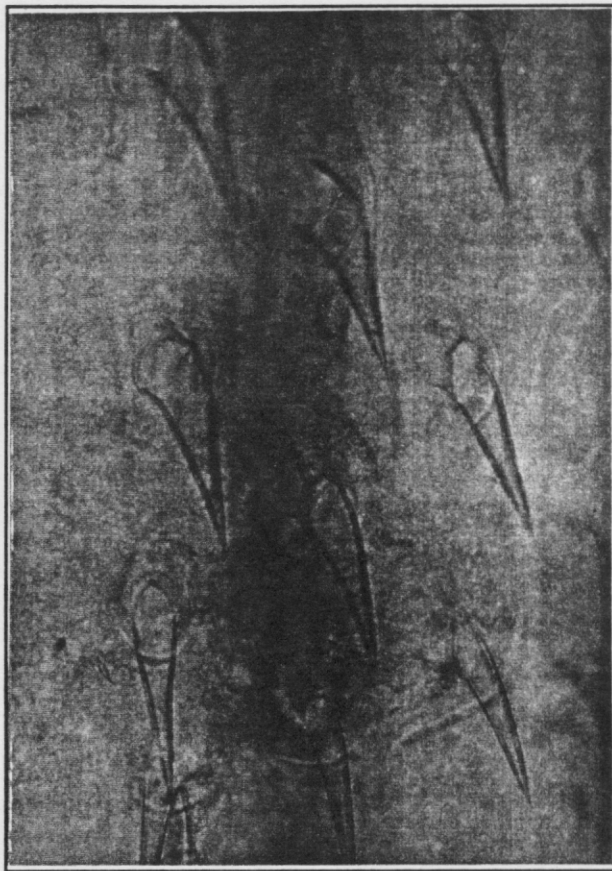
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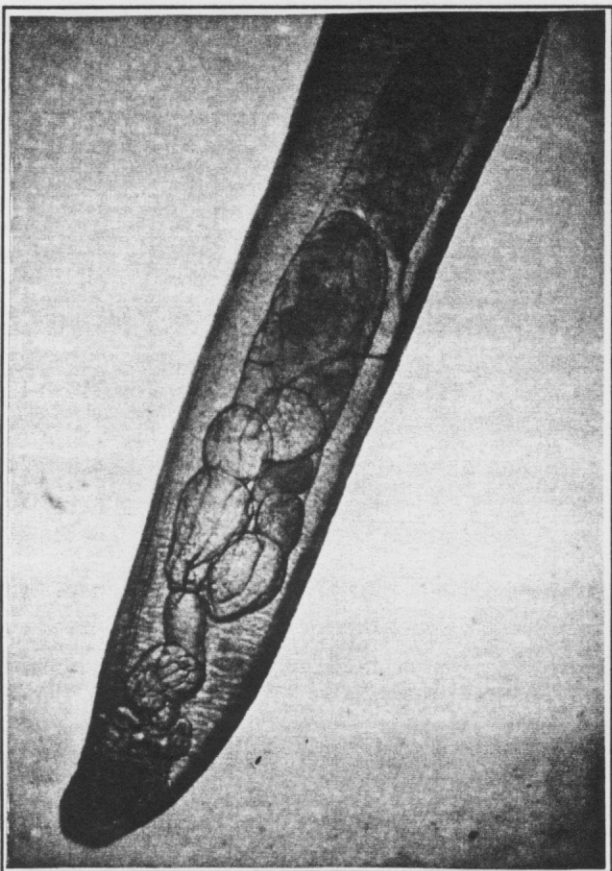
Fotografía 33.- Parte posterior de *Acanthocephalus claviceps* ♀. 200x



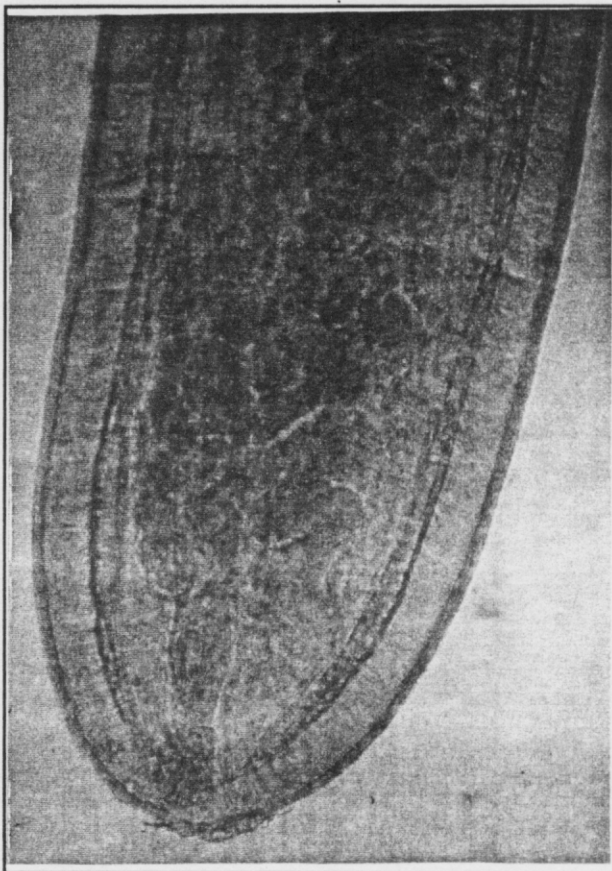
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Fotografia 31



Fotografia 32



Fotografia 33

APÉNDICE

FIRST REPORT OF *PSEUDODACTYLOGYRUS ANGUILLAE* (YIN ET SPROSTON, 1948) GUSSEV, 1965 (MONOGENEA: MONOPISTHOCOTYLEA) IN SPAIN

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Received 18 June 1991; accepted 5 February 1992

REFERENCE: SANCHEZ (I.), ZAPATERO (L.M.), SALCEDO (M.T.) & CARRASCAL (M.), 1992.— First report of *Pseudodactylogyrus anguillae* (Yin et Sproston, 1948) Gussev, 1965 (Monogenea: Monopisthocotylea) in Spain. *Research and Reviews in Parasitology*, 52 (1-2): 61-62.

ABSTRACT: This is the first report in Spain of the monogenean *Pseudodactylogyrus anguillae* on the gills of the European eel, *Anguilla anguilla*, obtained from the Esva river in Asturias (northern Spain).

KEY WORDS: Monogenea, Monopisthocotylea, *Pseudodactylogyrus anguillae*, *Anguilla anguilla*, Esva river, Spain.

The studies on the parasitofauna of European eel (*Anguilla anguilla* L.) from the north of Spain, carried out by the Parasitology Department of the Pharmacy Faculty of Madrid University, have produced this first report of *Pseudodactylogyrus anguillae* (Yin et Sproston, 1948) Gussev, 1965 for Spain.

Twenty-one specimens of *A. anguilla* from the Esva river (Asturias, northern Spain), ranging in length from 14 to 35 cm, were caught for parasitological examination. *P. anguillae* were found on the gills of nine of them, a 42.8% rate of infestation. The parasite charge fluctuated between 1 to 34 monogeneas.

The measurements were made examining lactophenol-cotton blue preparations.

The monogeneans obtained (n=25) were measured following the procedures of OGAWA & EGUSA (1976). Mean measurements in μm were: length, 727 (range: 560-1075); width at level of ovary, 166 (range: 110-305); length of copulatory organ, 89 (range: 70-120); vagina, 19 (range: 16-21); testicle length, 62 (range: 50-85); testicle width, 39 (range: 30-55); ovary length, 77 (range: 60-90); ovary width, 73 (range: 40-90); hamuli: A, 88 (range: 80-122); B, 89 (range: 78-96); C, 72 (range: 70-75); D, 10 (range: 10-11); E, 56 (range: 45-70); F, 40 (range: 35-52); G, 44 (range: 37-57); dorsal bar length, 63 (range: 50-80); dorsal bar width, 13 (range: 10-15); length of marginal hooks, 15 (range: 13-17).

The above mentioned measurements agree with those obtained by OGAWA & EGUSA (1976) and by LE BRUN, LAMBERT & JUSTINE (1986), showing some differences in the unsclerotized structures, influenced by the treatments during preparation of the parasites. Size and shape of the hamuli are the characteristics on which a taxonomic separation of the 2 species is based. The hamuli of *P. anguillae* are longer and less stout than those of *P. bini* (OGAWA & EGUSA, 1976; CHUNG, LIN & KOU, 1984; OGAWA *et al.*, 1985).

P. anguillae was reported for the first time, as a gill parasite of *Anguilla japonica*, by KIKUCHI (1929), although the first description was made by YIN &

SPROSTON (1984), with the name of *Neodactylogyrus anguillae*. GUSSEV (1965) studied this last monogenean species and also *P. bini* (KIKUCHI, 1929), found on *Anguilla reinhardtii* from Australia. He then created the genus *Pseudodactylogyrus* and included in it the above-mentioned species.

This monogenea has been described in different species of eel from Asia. In Europe, the first report was made by GOLOVIN (1977), who found them on European eels from an eel production plant in the Kalinin region (western ex-Soviet Union). Later this parasite was found on the gills of fry and cultured European eels from different countries: Hungary (MOLNAR, 1983, 1984), France (LAMBERT, LE BRUN & PARISELLE, 1984; LE BRUN, LAMBERT & JUSTINE, 1986), Italy (SAROGIA, FANTIN & ARLATI, 1985), Denmark (MELLERGAARD & DALSGAARD, 1986; KOIE, 1988) and Portugal (SARAIVA & CHUBB, 1989).

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