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A NEW NEMATODE (*Gongylonema ingluvicola*) PARASITIC IN THE CROP OF CHICKENS.

A postmortem examination performed recently upon a chicken at the zoological laboratory of the Bureau of Animal Industry resulted in the discovery of some nematode worms of unfamiliar appearance located in burrows in the mucous lining of the crop. By teasing with needles, about a dozen females and an equal number of males were removed without difficulty. The males, on account of their small size, could not be distinguished *in situ* without the assistance of a lens, while the position of the females was plainly indicated by small coiled ridges on the surface of the mucosa. In some cases a male and a female were found together; in other cases the worms occupied individual burrows.

When the worms were examined under the microscope it was at once seen that they were closely allied to *Gongylonema scutata*, a well-known parasite in the esophagus of cattle, and that they very evidently belonged in the same genus. Since, however, all the species of this genus heretofore known had been observed only in mammalian hosts, it seemed probable, as soon as the generic identity of the worms from the chicken was recognized, that they would be found to represent a species different from any yet described, and this turned out to be the case when their anatomy was compared with that of other members of the group. For this species, I propose the name *ingluvicola*, referring to the location in which it occurs. Reserving for a future paper a more complete account, I will confine myself at present to the following short description, which, however, I believe brings out the more salient characteristics of the species in sufficient detail to allow of its being readily recognized:

GONGYLONEMA INGLUVICOLA RANSOM.

Color white or yellowish. Cuticula annulated. At the anterior end of the body there is a zone of shields extending backward 575 to 680 microns in the male and 1.3 to 2.6 mm. in the female. Anterior of the excretory pore, which is situated 300 microns (♂) to 450 microns (♀) from the anterior end, the shields are comparatively few and scattered. Posterior of the excretory pore they are more numerous, and arranged more or less regularly in longitudinal rows, about 16 rows in the entire circumference of the body in the male and 20 to 24 rows in the female. The outline of the anterior shields is rounded, while the anterior and posterior borders of most of the shields posterior of the excretory pore are

flattened by mutual pressure. In the region of the excretory pore there is a transversely elongated large plate-like shield, corresponding in width to 4 or 6 and in length to 2 or 3 of the smaller shields. Cervical papillæ are present, situated about 100 microns from the anterior end of the body in the male and 135 microns in the female. On each side of the body, beginning a short distance (30 to 40 microns) behind the cervical papillæ, there is a narrow inconspicuous lateral membrane, which gradually becomes narrower and is lost to view within a distance of 200 to 600 microns from its point of origin. The mouth is small, 6 to 8 microns in diameter, surrounded by a chitinous collar, 25 to 30 microns in

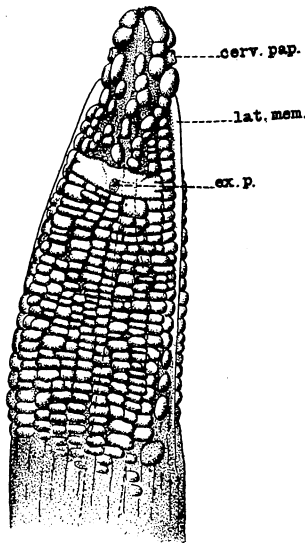


FIG. 1.—*Gongylonema ingluvicola*. Female. Ventral view of anterior end, showing the shield-like prominences of the cuticula, the cervical papillæ (*cerv. pap.*), the lateral membranes (*lat. mem.*), and the excretory pore (*ex. p.*) in the midst of a large plate-like shield. X 51. Original drawing from specimen No. 3955.3, Helminthological Collection, B. A. I., U. S. Dept. Agric.



FIG. 2.—*Gongylonema ingluvicola*. Male. Ventral view of posterior end, showing the asymmetrical bursal ala, the genital papillæ, and the tip of the right spicule projecting from the anal opening. X 105. Original drawing from specimen No. 3955.4, Helminthological Collection, B. A. I., U. S. Dept. Agric.

diameter. The pharynx is cylindrical, 32 to 40 microns long, lined with thick cuticula, and possesses a lumen corresponding in diameter to the mouth. The esophagus consists of two portions; a short, slender, colorless anterior portion, and a longer and thicker posterior portion, yellowish in color. The anterior portion measures 280 to 400 microns in length by 22 to 25 microns in width in the male, and about 540 microns in length by 32 to 40 microns in width in the female. At a distance of about 215 microns from the anterior end of the body in the male, and about 325 microns in the female, the anterior portion of the esophagus is surrounded by a nerve ring. The posterior portion of the esophagus measures 3.2 to 3.3 mm. long by 100 to 110 microns wide in the male, and 5 to 6

mm. long by 145 to 160 microns wide in the female. The intestine is 40 to 64 microns in diameter.

Male: Seventeen to 19 mm. long by about 250 microns wide. The width of the tail, including the two narrow asymmetrical bursal alæ, is about 225 microns. The origin of the right ala is 500 to 575 microns from the tip of the tail, while the origin of the left ala is more anterior, 600 to 700 microns from the tip of the tail. The number of genital papillæ is rather variable and they are not symmetrically arranged. In the specimens examined the number of preanal papillæ on the left side was 5 to 7, on the right side 4 to 5, and the number of postanal papillæ, 3 to 4 on the left side, 4 on the right side. The anus is situated 225 to 275 microns in front of the tip of the tail. The spicules are dissimilar. The left spicule is very long and filiform, with a barbed point, and measures about 9 microns in diameter. In its retracted state the left spicule is bent back and forth, its proximal end being located within the body 5 to 6 mm. behind the anterior end of the latter. It may, however, be extruded for almost its entire length through the anal opening, and when fully extended is at least as long as the body itself—that is, 17 to 19 mm. The right spicule is about 100 microns long by 15 microns thick. The terminal thick-walled portion of the vas deferens is 3 to 3.5 mm. long.

Female: Thirty-two to 45 mm. long by 400 to 490 microns broad. The anus is located 165 to 215 microns, and the vulva 2.5 to 3.3 mm., in front of the tip of the tail. The vagina, 55 to 80 microns in diameter, extends forward from the vulva about 13 mm. and branches into two large uteri, one of which extends forward, the other backward. The eggs in the vagina and terminal portions of the uteri contain coiled vermiform embryos, and measure 50 by 36 microns, with a shell 4 microns thick, to the outer surface of which a very thin membrane is more or less closely adherent. The embryos measure about 160 microns in length by 8 microns in width, and are provided with a spine at the anterior end.

Host: Chicken, *Gallus domesticus*.

Location: In burrows in the mucous lining of the crop.

Geographical distribution: The one chicken in which the species has been found was brought from Key West, Fla., to Washington, D. C., about one year prior to the date of death, and was probably infected at the former place, as the conditions under which it was kept at Washington were not favorable to parasitic infection.

Type specimens: No. 3955, Helminthological Collection, Bureau of Animal Industry, U. S. Department of Agriculture.

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