

**COTUGNIA SINGHI SP. NOV., FROM COLUMBA LIVIA AT JINTUR DIST PARBHANI (M.S.)  
INDIA**

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**ABSTRACT**

The present communication deals with a new species of the genus *Cotugnia*, *diamare* in 1893, collected from intestine, *Columba livia* at Jintur Dist. Parbhani, M.S. (India). It differ from all the known species of genus with characters, scolex large, Quadrangular, rostellum large, oval, sucker like, hooks two circles, 285 to 305 (298) in number, inner circle 120 to 130 (124) in number, outer circle 165 to 175(168) in number, suckers medium, oval, two pairs, mature segment medium, broader than long, craspedote, testes medium, oval, 65 to 70 (68) in number, cirrus thin, coiled, medium, ovary medium, oval, bilobed, round acini, vagina wide, posterior to the cirrus pouch, form receptaculum seminis, receptaculum seminis small, oval, ootype small, rounded, anteroventral to the ovary, genital pore medium, oval, longitudinal excretory canals are narrow, gravid proglottids large, squarish, broader than long, uterus medium, breaks in to uterine capsules.

**Key words:** *Cotugnia singhi*, *Columba livia*, Cestoda, Jintur.

**INTRODUCTION**

The genus *Cotugnia*, was erected by Diamare in 1893 with it's type species *Cotugnia digonopora* (Pasquale, 1890) were collected from domestic fowl, *Gallus domesticus* from Africa, Burma, India, Indonesia and Phillipines so for 22 species of *Cotugnia* are reported from columbi forms birds.

**MATERIALS AND METHODS**

Thirteen specimens of cestode parasite were collected from pigeon the intestine of the *Columba livia* at Jintur Dist. Parbhani. The collected worms washed, relaxed, preserved in 4 % formalin, stained with Harris Haematoxyllin, cleared in Xylol, and mounted in DPX. Drawing was made with the help of Camera lucida. All measurements are in millimeter (mm).

**Scolex** Scolex (fig. A) was large, quadrangular and measures 0.316 to 0.461mm. In length and 0.291 to 0.752mm in breadth. Rostellum was large, oval, sucker like and measure 0.175 to 0.325 mm in length and 0.175 to 0.301mm in width, Rostellum with two circles of **hooks** (fig.B) which are 285 to 305 (298) in number, inner circle with 120 to 130(298) hooks, outer circle with 165 to 175 (168) hooks and measure 0.003 to 0.004mm in length

and 0.001mm in breadth. Suckers four, oval, two pairs and measure 0.150 to 0.194mm in length and 0.155 to 0.170mm in width. Neck medium length and measures 0.786 to 0.835mm in length and 0.243 to 0.597mm in width.

**Mature proglottids**

proglottids (Fig.C) were medium, broader than long, craspedote, double set reproductive organs and measures 0.461 to 0.582mm in length and 0.981 to 1.078mm in breadth. Testes oval, medium, 65 to 70 (68) in number and measures 0.024 to 0.034mm in length and 0.019 to 0.029mm in breadth. Cirrus pouch medium, oval, obliquely placed, and measures 0.078 to 0.092mm in length and 0.024 to 0.034 mm in breadth, cirrus medium, coiled and measures 0.078 0.098mm in length and 0.005mm in breadth. Vas deferens medium coiled and measures 0.131 to 0.170mm in length and 0.005mm in breadth. Ovary medium, oval, indistinatly bilobed, round acini, obliquely and measures 0.136 to 0.155mm in length and 0.043 to 0.049mm in breadth. Vagina was wide; it runs posteriorly to cirrus pouch, starts from genital pore, form receptaculum seminis, reaches and opens in to the ootype and measures 0.218 to 0.267mm in length and 0.010 to 0.015mm in breadth.

Receptaculum seminis small, oval and measures 0.116 to 0.189mm in length and 0.015 to 0.024mm breadth, Ootype small, round, anteroventral to the ovary and measures 0.015mm diameter.

A genital pore was medium, oval, bilateral, and measures 0.024 to 0.209mm in length and 0.010 to 0.015mm in breadth. The longitudinal excretory canals were narrow and measure 0.005 to 0.010mm in width. **Gravid proglottids** (fig.D) was large, squarish, broader than long and measure 0.397 to 0.568mm in length and 2.158 to 2.358mm in breadth, uterus medium, breaks in to uterine capsules and measure 0.018 to 0.067mm in length and 0.029 to 0.034mm in breadth. **Eggs capsules** (fig.E) was small, oval and measure 0.025 to 0.030mm in length and 0.025 to 0.028mm in breadth.

<b>Type species</b>	- <i>Cotugnia singhi</i> n sp.
<b>Host</b>	- <i>Columba livia</i> .
<b>Habitat</b>	- Intestine
<b>Locality</b>	- Jintur Dist. – Parbhani (M.S.) India.

## RESULTS AND DISCUSSION

The genus *Cotugnia* was erected by Diamare in 1893 later on the following species was added to this genus:

- 1) *C. digonopora* (pasquale, 1890) Diamare, 1893.
- 2) *C. polyacantha* Fuhrmann, 1909.
- 3) *C. joyeuxi*, Baer, 1924.
- 4) *C. cuneata tenuis* Meggitt, 1924.
- 5) *C. parva* Bear, 1925.
- 6) *C. fleari* Meggitt, 1929.
- 7) *C. nervosa* Meggitt, 1929.
- 8) *C. bahli* Johri, 1934.
- 9) *C. intermedia* Johri, 1934.
- 10) *C. noctua* Johri, 1934.
- 11) *C. lamanesis* Yamaguti, 1935.
- 12) *C. rimandoi* Tubanguai at Masilungan, 1937.
- 13) *C. magna* Burt, 1940.
- 14) *C. aurangabadensis* Shinde, 1969.
- 15) *C. columbae* Shinde, 1969.
- 16) *C. shrivaslavai* Malviya and Dutta, 1970.
- 17) *C. magzoubii* Magzoubi and kasim, 1980.
- 18) *C. satpulensis* Malhotra and Capoor, 1983.
- 19) *C. yamaguti* shinde, Jadhav and Kadam, 1983.
- 20) *C. vishakhapatnamensis* Kolluri, Laxmi and Rao, 1988.
- 21) *C. rajivji* Jadhav, Bawane and Kadam, 1994.

22) *C. kamatiensis* Kharade and shinde, 1995.

The present communication, deals with the description of new species *Cotugnia singhi* from *Columba livia* Jintur Ta. Jintur Dist. Parbhani (M.S. India)

1. The worm under discussion, differs from *C. bahli* which is having the diameter of scolex 0.316 to 0.461mm x 0.291 to 0.752mm Vs 0.50mm, diameter of rostellum 0.175 to 0.325mm x 0.175 to 0.301mm Vs 0.34mm, the number of rostellar hooks 285-305(298) Vs 332. The number of testes 65-70(68) Vs 69 - 74.

2. The Studied tapeworm, differs from *C. intermedia* which is having the diameter of scolex 0.316 to 0.461mm x 0.291 to 0.752mm Vs 0.44 - 0.525mm, The number of testes 65- 70(68) Vs 69 - 74 .

3. The experimental worm, differs from *C. shrivastavi* which is having the diameter of scolex 0.316 to 0.461mm x 0.291 to 0.752mm Vs 0.726mm , diameter of rostellum 0.175 to 0.325mm x 0.175 to 0.301mm Vs 0.446mm. The number of testes 65-70 (68) Vs 80 - 85.

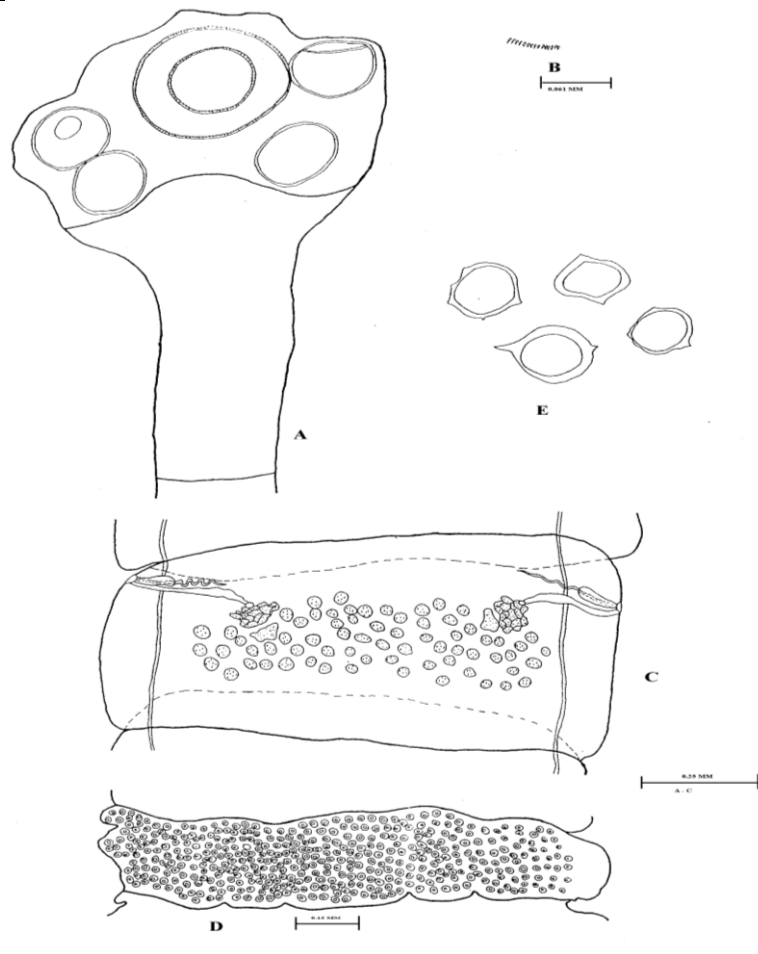
4. The worm, differs from *C. satpulensis*, which is having the diameter of scolex 0.316 to 0.461mm x 0.291 to 0.752mm Vs 0.535mm, diameter of rostellum 0.175 to 0.325mm x 0.175 to 0.301mm Vs 0.230 mm , the number of rostellar hooks 285-305(298) Vs 337, the number of testes 65-70 (68) Vs 43 - 92 .

5. *Cotugnia singhi* sp. nov., differs from *C. rajivji* which is having the diameter of the scolex 0.316 to 0.461mm x 0.291 to 0.752mm Vs 0.530 - 0.758 to 0.621 -1.069mm, diameter of rostellum 0.175 to 0.325mm x 0.175 to 0.301mm Vs 0.374-0.045mm. The number of testes 65-70 (68) Vs 60 - 66.

The above noted characters, are enough to erect a new species, for these worms and hence the name *Cotugnia singhi* n.sp. is proposed, in honour Dr. Kunwar Suresh Singh, Ex-Professor and Head, Parasitology Division, I.V.R.I. Izznagar, U.P., who has contributed so much in our knowledge of Cestodology.

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***Cotugnia singhi* sp. nov. Figs A to E**

Fig. A-Scolex, B-Hooks, C-Matured Segments, D-Gravid segment, E-Eggs capsule.

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