

from the intestine of the *M. armatus*, at Parli, Dist. Beed, M.S. India. Patil and Jadhav added *S. tappi* from *M. armatus* in 2003. Jadhav, 2005 made the review article of the genus *Senga* from freshwater fishes from Maharashtra state, India. Pande et.al, 2006 added two new species i.e. *S. ayodhensis* from *Amphinuou* *cuchia* and *S. baughi* from *Rita rita*. Kalse A. T, 2009 added one new species *senga panzarensis* from *Mastacembelus armatus*. Bhure et.al, 2010 added one new species *S. madhavii* from *Mastacembelus armatus*. Pardeshi P.R, 2011 added one new species *Senga rupchandensis* from *Channa striatus*. Dhole et al., 2011 *Senga rostellarae* and *Senga chandrashekhari* from *Mastacembelus armatus*. Maharashtra state India. Jadhav et al., 2012 added *Senga govindii* from intestine of *Mastacembelus armatus* from Sina Kolegaon Dam, Osmanabad Dist. (M.S.) Bhure et al., 2014 described *Senga microrostellata* from *Mastacembelus armatus* (Lecepede, 1800); at Parabhani (M.S.) India. More recently Fartade Asawari and Fartade Madhukar, 2014 described *Senga nandedensis* from freshwater fish *Mastacembelus armatus* in Godavari basin (M.S.) India.

2. MATERIAL AND METHODS:

Eight adult cestode specimens were recovered from the intestine of the freshwater fish *Channa striata* (Bloch, 1793), collected from Koradi Dam, District Buldhana (M.S.), India. The worms were flattened, fixed in 4% formalin, and stained using Acetocarmine and Haematoxylin. Dehydration was carried out through a graded series of alcohol, followed by clearing in xylene, and finally mounting in D.P.X. to prepare whole-mount slides for detailed anatomical study. Illustrations were produced with the aid of a camera lucida, and all measurements are reported in millimeters.

3. DESCRIPTION:

The cestodes exhibited an elongated body with a distinct scolex, followed by immature and mature proglottids. The scolex was barrel-shaped, tapering toward the anterior end and broad posteriorly, measuring 1.700 (range: 1.530 1.870) mm in length and 0.782 (range: 0.374 1.190) mm in width.

At the anterior tip, a well-developed rostellum was present, armed with 20 25 hooks, each measuring 0.057 (0.054 0.060) mm in length and 0.006 (0.003 0.009) mm in width, arranged in two semicircular rows. The scolex also bore a pair of bothria extending posteriorly to the end of the scolex, each measuring 1.411 (1.360 1.462) mm in length and 0.145 (0.085 0.204) mm in width.

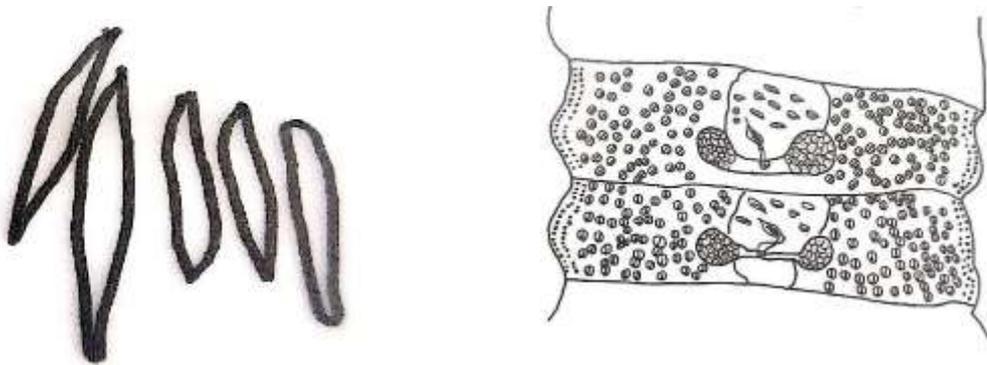
1. The neck is reduced.
2. The mature proglottid was observed to be approximately four times wider than its length, measuring 1.197 (range: 1.026 1.368) mm in length and 4.427 (range: 4.180 4.674) mm in width.
3. The testes, which were oval in shape and located on either side of the ovary, measured 0.095 (0.076 0.114) mm in length and width and ranged in number from 125 to 130.
4. The oval-shaped cirrus pouch, which was situated close to the uterus, was 0.247 (0.190 0.304) mm long and 0.114 (0.076 0.152) mm wide. Within it, the cirrus was a tiny, narrow tubular structure that was 0.029 (0.019 0.038) mm wide and 0.190 (0.152 0.228) mm long.
5. Located posteriorly in the segment, the ovary was bilobed and dumbbell-shaped, measuring
6. 0.532 (0.380 0.684) mm in length and 1.064 (0.570 1.558) mm in breadth.
7. The vagina was a short tubular structure that extended posteriorly to the ootype and had dimensions of 0.133 (0.114 0.152) mm in length and 0.038 mm in width.
8. The uterus was saccular, located in the anterior portion of the proglottid, filled with numerous eggs, and measured 0.798 (0.570 1.026) mm in length and 0.855 (0.570 1.140) mm in width.
9. The vitellaria were granular, arranged in two distinct lateral rows along each segment



Scolex

Mature Segment

Camera Lucida of Scolex



Hooks

Camera Lucida of Mature Segment

Comparison with earlier species:

Senga species have been found in cypriniform and labyrinth form fishes in South- East Asia. In 1934, *Betta splendens*, a Siamese fighting fish housed in an aquarium in Vincennes, France, served as the model for *Senga besnardi* Dollfus. *Senga ophioccephalina* Tseng, 1933 (syn. *Anchistrocephalus ophioccephalina* Tseng, A. polyptera Southwell, 1913, nec A. polypteri (Leydig) of Montic, 1890) is found in *Ophioccephalus argus*, which is native to Tsinan and Peking (now Beijing) in China. Originally identified as *Bothriocephalus pcynomera* Woodland, *Senga pcynomera* (Woodland, 1924) was discovered in Allahabad, India, with *Ophioccephalus marulius*. From the spiny eel *Mastacembelus armatus* (Lacepede) obtained in Lucknow, India, Johri (1956) described *Senga lucknowensis*. Later, a number of other *Senga* species were described by different researchers, who gave thorough explanations of their taxonomic differences and distinctive physical traits. The basic arrangement of internal organs in the current cestode species is very similar to that of other known members of the genus *Senga* Dollfus, 1934. Its pear-shaped scolex, shallow bothria, lack of a neck, fewer testes (numbers 50 55), and lobate vitellaria, however, set it apart from *Senga ophioccephalina* Tseng, 1933. The present form can be distinguished from *Senga besnardi* Dollfus, 1934 by its triangular scolex bearing 50 hooks, complete lack of a neck, and mature proglottids that are broader than long. Additionally, it exhibits a higher number of testes (160 175), a vagina located posterior to the cirrus pouch, a compact ovary, and granular vitellaria. In comparison with *S. pcynomera* Woodland, 1934, it differs in having an elongated scolex with 60 hooks, absence of a neck, an ovary divided into two discontinuous groups, and indistinct segmentation of vitellaria; this species was reported from *Ophioccephalus marulius* in Allahabad, India. Although the present form resembles *Senga lucknowensis* Johri, 1956, it differs in several key morphological features. The body measures 210 212 mm in length. The scolex is pear- shaped, narrow anteriorly, and broad posteriorly, with paired fleshy bothria (0.86 1.25 mm) ending anteriorly in a notched disc that bears two semicircular rows of 36 48 hooks. The neck is absent. Immature segments are nearly square (0.61 × 0.78 mm), whereas mature proglottids are broader than long (0.39 × 1.27 mm). Numerous testes (40 × 43 46 μm) surround the bilobed ovary. The cirrus sac is muscular with a coiled cirrus, and the cirro- vaginal aperture opens anterior to the ovary. The ovary is bilobed, measuring 150 190 × 100 113 μm. The uterus lies anterior to the ovary, irregularly coiled with 7 10 turns (200 230 μm). Vitelline follicles are grouped in the cortical parenchyma. Eggs are oval, thin-shelled, operculum-less, and

measure $46\ 60 \times 24\ 28\ \mu\text{m}$. This species was reported from *Mastacembelus armatus* at Lucknow, India. The present worm differs from *Senga malayana* Fernando and Furtado, 1964 by having a body $9.7\ 73.8 \times 0.7\ 3.1\ \text{mm}$, a tubular or cylindrical scolex ($0.68\ 1.8 \times 0.24\ 0.35\ \text{mm}$), and an apical disc ($0.15 \times 0.23\ 0.32\ \text{mm}$) armed with 60 hooks ($0.006\ 0.009\ \text{mm}$). Bothria measure $0.49\ 0.91 \times 0.20\ 0.225\ \text{mm}$, and the neck is absent. Mature proglottids are broader than long, numbering 100 500. Testes number 120 150 ($0.045\ \text{mm}$), the ovary is bilobed, the vagina is short and tubular, and the vitellaria are lobate in two clusters. This species occurs in Malayan freshwater fishes. In contrast to *Senga parva* Fernando and Furtado, 1964, the current form has an apical disk ($0.10\ 0.12 \times 0.12\ 0.30\ \text{mm}$) with 42 44 hooks ($0.01\ 0.015\ \text{mm}$), a pear-shaped scolex ($0.46\ 0.53\ \text{mm}$), and a body measuring $5.17 \times 0.362\ 0.832\ \text{mm}$. The neck is missing, and the bothria are $0.462\ 0.465 \times 0.15\ \text{mm}$ in size. Mature segments (numbering 80 100, $0.03\ 0.075 \times 0.09\ 0.4\ \text{mm}$) are wider than length. The ovary is spherical, the vitellaria are granular, and there are 150 180 testes. There have also been reports of this species in freshwater fish from Malaya. The current species is different from *Senga visakhapattanmensis* Ramadevi et al., 1973 in that it has 50 55 testes, a circular scolex with 46 52 hooks, and no neck. This species was collected from *Ophiocephalus punctatus* at Visakhapatnam, India. In comparison with *Senga taunsaensis* Zaidi, Daulat Ali, and Khan Daler, 1976, the present worm has a body measuring $39.150\ 41.760 \times 1.218\ 1.228\ \text{mm}$ and a rectangular scolex ($0.855\ 0.955 \times 1.152\ 1.252\ \text{mm}$) with two shallow bothria ($0.099\ 0.108\ \text{mm}$). The apical disc ($0.177\ 0.197 \times 0.038\ 0.051\ \text{mm}$) bears 44 46 hooks, is notched at both ends, with 42 44 long hooks ($0.050\ 0.082 \times 0.010\ 0.015\ \text{mm}$) and four rudimentary hooks ($0.023\ 0.041 \times 0.008\ 0.010\ \text{mm}$). The neck is absent. Proglottids are acraspedote and broader than long. Numerous testes are located in the lateral medullary fields ($0.033\ 0.038\ \text{mm}$). The ovary is bilobed, submedian, medullary, and post-equatorial ($0.155\ 0.159 \times 0.090\ 0.094\ \text{mm}$). The uterus is coiled medially and opens at the cirro-vaginal aperture. Eggs are numerous, small, and oval ($0.043\ 0.051 \times 0.020\ 0.028\ \text{mm}$). This species was reported from *Channa gachua* at Taunsa Barrage, Pakistan. The current worm is different from *Senga khami* Shinde et al., 1980 in that it has a rectangular scolex ($1.13\ 1.21 \times 0.37\ 0.39\ \text{mm}$), a body of $126 \times 1.94\ \text{mm}$, a bothria measuring $0.65 \times 0.22\ \text{mm}$, and 55 57 hooks. The current species does not have a neck like *S. khami* does. Mature proglottids have 155 testes, a bilobed post-equatorial ovary ($0.73 \times 0.35\ 0.39\ \text{mm}$), and follicular vitellaria. They are also slightly wider than long ($1.36 \times 1.94\ \text{mm}$). *Mastacembelus armatus* of the Kham River in Aurangabad, India, is where this species was first discovered. The current form differs from *Senga aurangabadensis* Jadhav et al., 1980 in that it has mature proglottids that are twice as broad as long, an oval scolex with 50 52 hooks, and no neck. The ovary is bilobed and post-equatorial, the vagina is small and tubular, the cirrus pouch is medullary, the testes are 240 260, and the vitellaria are follicular and cortically positioned. The current species is different from *Senga godavarii* Shinde et al., 1980 in that it has a pear-shaped scolex without a neck, two fields of 220 230 rounded testes, an oval cirrus pouch in the proglottid's anterior half, a vagina in front of the cirrus pouch, and three to four rows of follicular vitellaria. *Mastacembelus armatus* from Nanded, Maharashtra, India, is the source of this species' report. The current species can be distinguished from *Senga paithanensis* Kadam et al., 1981 by its prominent triangular scolex bearing 54 hooks, a distinct neck, and 130 135 rounded or oval testes arranged in two lateral groups. The ovary is bilobed with elongated, blunt acini; the vagina is thin and tubular; and the vitellaria are follicular, arranged in 2 3 rows. This species was reported from *Mastacembelus armatus* at Paithan, District Aurangabad, Maharashtra, India. Unlike *Senga raoi* Majid et al., 1984, the current cestode has a pear-shaped scolex that is large in the middle and taper at both ends, with two shallow bothria extending posteriorly. It has 46 hooks, no neck, and 65 170 small, spherical testes. The cirrus pouch is elliptical, the vitellaria are granular, and the ovary is post-equatorial, compact, and bilobed. From *Channa punctatus* in Jagannathpuri, Orissa, India, *S. raoi* was reported. This form is different from *Senga jagannathae* Majid et al., 1984 in that it has a short neck, two spoon-shaped bothria, 44 rostellar hooks, and a pear-shaped scolex that is wider posteriorly. The tiny, spherical testes are numbered 240 250. The vagina opens in front of the cirrus pouch, the ovary is bilobed, compact, and spatulate, the cirrus pouch is oval, and the vitellaria are granular. *Channa punctatus* was the source of this species' recovery in Jagannathpuri, Orissa. The current form has a pear-shaped scolex with 22 25 hooks and 60 70 oval testes grouped in two fields, in contrast to *Senga gachauae* Jadhav et al., 1991. It was gathered at Solapur, Maharashtra, India, from *Channa gachua*. The current species has an oval scolex with 45 47 hooks and no neck, which sets it apart from *Senga maharashtrii* Jadhav et al., 1991. The oval-shaped testes are numbered 80 90 and are grouped in two fields. *Mastacembelus armatus* from Amravati (Daryapur), Maharashtra, India, was the source of this species' report. The current cestode differs from *Senga chauhani* M. Hasnain, 1992 in that it has a large oval scolex, 40 44 rostellar hooks, a short neck, and mature proglottids that are wider than long. The testes are oval and number between 200 and 210, the ovary is bilobed, the vagina is a small tube, and the vitellaria are follicular and arranged in four to five rows. This species was discovered in *Channa punctatus* at Jamshedpur. Unlike *Senga mohekarae* Tat and Jadhav, 1997, the current form has a medium-sized, elongated, oval scolex that measures $0.670 \times 0.398\ \text{mm}$ and contains 151 hooks organized in two semicircular rows. The testes are medium, oval, and number 300 310; the mature segments are wider than long; the vitellaria are follicular, with

three to four rows on each side; and the ovary is bilobed, elongated, and posterior to the middle of the proglottid. The triangular scolex with 42-44 rostellar hooks, oval to rounded testes with 285-295 in two fields, and a vagina that opens anterior to the cirrus pouch are characteristics that set this form apart from *Senga tappi* Patil et al., 2003. The conical scolex with 29 hooks, lack of a neck, many spherical testes, bilobed ovary, narrow, coiled vagina, and follicular vitellaria are characteristics that set the current species apart from *Senga ayodhensis* Pandey, 2006. Compared to *Senga baghuai* Pandey (2006), this species has a long neck, mature segments that are wider than long, 40-50 testes, a compact ovary, a thin vagina, follicular vitellaria, and a pear-shaped scolex with 28 hooks. The present form differs from *Senga jadhavae* Bhure et al., 2007 in having a triangular scolex (1.332-1.458 × 0.258-0.918 mm) with a rounded rostellum (0.043-0.061 × 0.231-0.241 mm) armed with 50-54 hooks. The short neck measures 0.230-0.295 × 0.390-0.565 mm. Mature proglottids are 0.425-0.480 × 1.495-1.625 mm; testes are small, rounded, 310-320 in number (0.020-0.025 mm). The cirrus pouch (0.170-0.180 × 0.070-0.080 mm) is followed by a bilobed ovary (0.095-0.245 × 0.410-0.425 mm), a coiled vagina (0.245-0.255 × 0.010 mm), and 4-5 rows of follicular vitellaria. The uterus is saccular. This species was recovered from *Mastacembelus armatus* at Aurangabad, Maharashtra, India. Unlike *Senga chandkapurensis* Kahadap et al., 2007, the present species has a barrel-shaped scolex (0.730-0.854 × 0.175-0.301 mm) with bothria measuring 0.577-0.579 × 0.024-0.160 mm. The rostellum bears 28-30 hooks arranged circularly (0.052-0.065 × 0.001-0.009 mm). The short neck is 0.010-0.087 × 0.180-0.194 mm. Mature proglottids are broader than long (0.735-0.811 × 1.243-1.379 mm); testes are 170-180, small and rounded (0.023-0.045 mm). The oval cirrus pouch is obliquely positioned (0.121-0.174 × 0.023-0.076 mm); the ovary is bilobed, large, and transverse (0.023-0.144 × 0.681-0.932 mm); the vagina opens anterior to the cirrus pouch (0.102 × 0.011 mm). The cirrus measures 0.059-0.071 × 0.143-0.160 mm; the uterus is saccular; eggs measure 0.028-0.051 × 0.001-0.023 mm; and vitellaria are granular. This species was collected from *Mastacembelus armatus* at Chandikapur, District Bidar, Karnataka, India. This variety has an oval scolex that is narrow at both sides (0.474-0.565 × 0.401-0.418 mm) and a bilobed rostellum (0.045-0.061 × 0.151-0.186 mm) that is equipped with 24-28 hooks (0.042-0.054 mm) in contrast to *Senga ticto* Shrivastava, 2007. The neck is missing, and the bothria are deep and elongated (0.452-0.487 × 0.066-0.077 mm). Proglottids are craspedote, measuring 0.251-0.312 × 0.552-0.672 mm, which is wider than long. The cirrus pouch has a thin membrane (0.036-0.037 × 0.037-0.041 mm), and the testes are 60-120, oval to round (0.020-0.026 × 0.027-0.038 mm). The vagina measures 0.006-0.007 mm, while the bilobed ovary is medial and posterior (0.063-0.103 × 0.212-0.345 mm). There is no receptaculum seminis. The two lateral bands of vitellin follicles (0.012-0.015 × 0.018-0.026 mm) are cortical. The eggs are oval and operculated (0.020-0.023 × 0.030-0.033 mm), while the uterus is midline and sac-like (0.075-0.244 × 0.076-0.277 mm). *Puntius ticto* at Jhansi was the source of this species' report. U.P., India.

The present form differs from *Senga nathsagensis* Kankale, 2008 in that it has a long, somewhat conical scolex (0.3494 × 0.2909 mm) and a round to oval rostellum with 30-32 unequal hooks. The neck of mature proglottids is long (0.2694 × 0.4368 mm), however they are wider than long (0.213 × 0.309 mm). 200-250 checkpoints (0.7766 mm). The oval, pre-ovarian cirrus pouch is 0.1697 × 0.2038 mm, while the cirrus itself is short, thin, and curved (0.1698 mm). The vagina is a long, thin tube that is 0.2547 mm, while the seminal receptacle is 0.1577 mm. The ovary is dumbbell-shaped, bilobed, and has a small ootype (0.5825 mm). The uterus is saccular and centrally located (0.2111 × 0.1620 mm); the eggs are 25-27; the gravid proglottids measure 0.5193 × 0.9218 mm. The current species has a triangular scolex with 36 hooks, mature segments that are larger than long, and a pointed anterior and broad posterior compared to *Senga kaigaonensis* Wankhede & Reddy, 2009. The pre-ovarian cirrus pouch is positioned obliquely between tests 285 and 295. It was found in Kaigaon Toka, Aurangabad, Maharashtra, India, among *Mastacembelus armatus*. This species is different from *Senga panzaraensis* Mangale and Kalse (2009) in that it has an oval rostellum (0.054 × 0.071 mm) with 58 hooks and a triangular scolex (0.545 × 0.116-0.406 mm) with two bothria (0.428 × 0.161-0.299 mm). Mature proglottids are 5 times wider than long (0.179-0.210 × 1.089 mm), with a short neck measuring 0.089 × 0.169 mm. The 40-45 testes are spherical and tiny (0.017 mm). The vaginal orifice is tiny and oval (0.014 × 0.031 mm), and the oval, transversely positioned cirrus pouch is 0.076 × 0.0402 mm. The vagina is a narrow, slightly curved tube (0.049 × 0.05 mm), while the ovary is big and bilobed (0.084-0.121 × 0.540 mm). The eggs are oval and operculated (0.56 × 0.28 mm); the vitellaria are granular and have four to five rows; and the ootype is tiny and oval (0.014 mm), extracted from *Mastacembelus armatus*'s small intestine in the Panzara River, Dhule, Maharashtra, India. The triangular scolex (0.910 × 0.519 mm), bothria (0.958 × 0.106 mm), and rounded rostellum (0.101 × 0.247 mm) with 40-44 hooks arranged in two uneven semicircles of long (0.108 × 0.010 mm) and short (0.085 × 0.006 mm) hooks are how the current form varies from *Senga madhavae* Bhure et al., 2010. There is no neck. Testes are 200-220, tiny, oval (0.021 × 0.031 mm), and mature proglottids are 5-6 times broader than length (0.271 × 2.199 mm). The ootype is medium, oval (0.024 mm), the receptaculum seminis is straight (0.029 × 0.009 mm), the vagina is a thin tube (0.094 × 0.009 mm), and the oval, pre-ovarian cirrus pouch is 0.058 × 0.024 mm. The uterus is saccular (0.065 × 0.538 mm), the vitellaria are granular, and the ovary is dumbbell-shaped (0.992 ×

0.116 mm). Recovered in Pune from *Mastacembelus armatus*, Maharashtra, India.

Compared with *Senga satarensis* Bhure et al., 2011, the present species exhibits a pear-shaped scolex (0.635 × 0.410 mm) tapering anteriorly, broad posteriorly, with paired sessile bothria (0.684 × 0.067 mm) and an oval to rounded rostellum (0.030 × 0.070 mm) bearing 28–30 hooks (long 0.083 × 0.009 mm; short 0.071 × 0.009 mm). Neck is absent; mature proglottids 6–7× broader than long (0.337 × 1.618 mm); testes 175–200, small, oval (0.024 × 0.019 mm). Cirrus pouch is oval (0.065 × 0.021 mm); vas deferens short, straight (0.019 × 0.009 mm); vagina slightly curved, thin (0.065 × 0.009 mm); receptaculum seminis 0.021 × 0.014 mm. Ovary is large (0.497 × 0.055 mm); vitellaria granular; uterus saccular (0.145 × 0.342 mm); eggs elongated (0.040 × 0.015 mm). Recovered from *Mastacembelus armatus* at Satara, Maharashtra, India. The present form differs from *Senga mangalbaiiae* Bhure et al., 2011 in having a conical scolex tapering at apex, broad at base, clearly separated from strobila (2.038 × 0.878 mm), with two fleshy bothria (1.662 × 0.349 mm). Rostellum is oval to rounded (0.116 × 0.266 mm) with 38–42 hooks (long 0.093 × 0.010 mm; short 0.064 × 0.008 mm). Neck is absent; mature proglottids 2–3× broader than long (0.449 × 1.084 mm). Testes 70–80, oval to rounded, scattered laterally (0.024 × 0.019 mm). Cirrus pouch small, oval (0.080 × 0.041 mm); cirrus thin, straight (0.084 × 0.009 mm); genital pore small, oval (0.019 × 0.012 mm). Vagina originates at gonopore (0.050 × 0.007 mm); receptaculum seminis thin, short (0.031 × 0.012 mm); ootype small, oval (0.029 mm); ovary large, bilobed, nut-shaped, posteriorly located (0.439 × 0.077 mm). Uterus saccular (0.196 × 0.415 mm); eggs oval, non-operculated (0.034 × 0.016 mm); vitellaria granular, 2–3 rows. Recovered from *Mastacembelus armatus* at Osmanabad, Maharashtra, India. The current form's large body, flat cylindrical scolex (0.7159 × 0.2386 mm), and two overlapping bothria (left 0.4545 × 0.1477 mm, right 0.4886 × 0.1931 mm) set it apart from *Senga rupchandensis* Pardeshi et al., 2011. The flat rostellum has two semicircular rows of 42–55 hooks. Testes are rounded, 350–370 (0.09223 mm), mature proglottids are 1.2523 × 0.4514 mm, and there is no neck. Vagina elongated, tubular (1.0873 × 0.08737 mm); ovary bilobed (left 0.1601 × 0.1213 mm, right 0.2184 × 0.07766 mm); circular pouch sac-like, oval (0.05339 × 0.03883 mm). The oval, non-operculated eggs of Vitellaria follicular measure 0.01925 × 0.01069 mm. reported from the *Channa striatus* in the Indian state of Maharashtra's Jalna District. The current specimen can be differentiated from *Senga rostellare* Dhole et al., 2011 by its elongated body and medium-sized, pear-shaped scolex (1.08 × 0.57 mm) bearing two large bothria right (0.923 × 0.149 mm) and left (0.981 × 0.271 mm). The rostellum (0.156 × 0.175 mm) has 41 hooks (0.051 × 0.004 mm) arranged semicircularly. The neck is absent; mature proglottids are medium and quadrangular (0.745 × 0.942 mm). Testes are medium, rounded, numbering 217–242, and arranged in a single crowded field (0.039 × 0.038 mm). The cirrus pouch is elongated and oval (0.942 × 0.105 mm), with a short, thin, curved cirrus (0.082 × 0.008 mm). The ovary is medium, distinctly bilobed with 2–3 blunt acini (0.253 × 0.069 mm), and the vagina measures 0.302 × 0.008 mm. Vitellaria are follicular, aligned in a single row along each lateral margin. Gravid segments are slightly longer than broad (0.841 × 0.749 mm), with a sac-like uterus (0.587 × 0.074 mm) and oval, operculated eggs (0.052 × 0.016 mm). This worm was collected from the intestine of *Mastacembelus armatus* L., Maharashtra, India. The current specimen is different from *Senga chandrashekhari* Dhole et al., 2011 in that it has two fleshy bothria (1.048 × 0.21 mm) and a big scolex that is broad posteriorly and small anteriorly (1.341 × 0.684 mm). There are 78 semicircularly placed hooks (0.399 × 0.003 mm) on the rostellum (0.289 × 0.245 mm). Mature segments are slightly squarish and wider than long (0.622 × 1.469 mm), but the neck is short (0.1 × 0.28 mm). The medium, rounded testes are uniformly dispersed in two lateral areas (0.056 × 0.038 mm) and range in number from 98 to 117. The cirrus pouch is 0.157 × 0.038 mm and is tiny and tubular. The vagina is long and wide (0.442 × 0.135 mm), while the ovary is bilobed, medium-sized, and transversely positioned (0.135 × 0.157 mm). Vitellaria are follicular, arranged in 1–2 lateral rows. Gravid segments are broader than long (0.846 × 0.941 mm), with a sac-like uterus (0.653 × 0.824 mm) and oval, operculated eggs (0.035 × 0.016 mm). The specimen was obtained from *Mastacembelus armatus* L., Maharashtra, India. The current form differs from *Senga govindii* Jadhav et al., 2012 in having a long, thin, milky-white body and a large triangular scolex (8.54 × 2.46 mm) with a rostellum armed with 45–50 hooks (6.12 × 1.28 mm). Bothria are two, sac-like (2.01 × 0.72 mm). A neck is present (1.52 × 1.44 mm). Mature proglottids are rectangular, three times broader than long (1.77 × 3.01 mm). Testes are medium, oval, 100–130 in number (0.05 × 0.12 mm). The cirrus pouch is oval (0.22 × 0.28 mm), with a thin cirrus (0.19 × 0.03 mm). The ovary is large, bilobed, and central (0.57 × 0.61 mm). The vagina is a thin tube posterior to the cirrus pouch (1.75 × 0.03 mm), and the genital pore is small and rounded (0.09 × 0.07 mm). Gravid segments are broader than long (1.94 × 5.49 mm), with a large sac-like uterus (0.98 × 1.33 mm) and oval, non-operculated eggs (2.25 × 7.58 mm). Vitellaria are granular, in 2–3 rows along the lateral margins. This species was recorded from *Mastacembelus armatus* at Sina Kolegaon Dam, Osmanabad, Maharashtra, India. The current specimen has two shallow, oval bothria and a bluntly rounded, pear-shaped scolex (0.50 × 0.27 mm), which sets it apart from *Senga silcharensis* Puinyabati, Shomorendra, and Kar Devashish, 2013. 44 hooks are grouped in two semicircles (0.06 × 0.005 mm) on the rostellum. There is no neck. Both mature and gravid segments are wider than length (gravid: 0.11 × 1.21 mm; mature: 0.12–0.15 × 0.27

1.10 mm). The testes are 0.035 x 0.03 mm and are spherical and tiny. The ovary is bilobed and post-equatorial (left: 0.07 0.10 x 0.12 0.13 mm; right: 0.07 0.08 x 0.11 0.12 mm). Eggs measure between 0.025 and 0.05 x 0.02 mm, while vitellin follicles measure 0.02 x 0.02 mm. This species was found in Chatla Haor, Silchar, Assam, in *Channa punctatus*. In contrast to *Senga microrostellata* Bhure et al. (2014), the current form has a triangular scolex that is clearly different from the strobila, tapering anteriorly and broad posteriorly (1.218 x 0.686 mm). Scolex has an oval rostellum (0.109 x 0.206 mm) with 18 20 hooks arranged in a circle (large hooks: 0.097 x 0.009 mm; short hooks: 0.085 x 0.007 mm) and two sessile bothria (1.072 x 0.266 mm). There is no neck. Mature proglottids measure 0.211 x 3.407 mm, which is 8 9 times wider than long. The 250 300 tiny, rounded, oval-shaped testes are arranged laterally along the ovary and cirrus pouch (0.016 x 0.019 mm). The cirrus pouch is small, elongated, transversely placed (0.060 x 0.029 mm), with a short straight cirrus (0.038 x 0.012 mm). Vas deferens is thin (0.016 x 0.009 mm), and the genital pore is small and oval (0.016 x 0.012 mm). The vagina originates from the gonopore (0.055 x 0.012 mm) and leads to a short receptaculum seminis (0.021 x 0.012 mm). Ootype is oval to rounded (0.019 mm). Ovary is bilobed, dumbbell-shaped (0.538 x 0.041 mm). Uterus is saccular (0.050 x 0.40 mm), containing oval, non-operculated eggs (0.044 x 0.019 mm). Vitellaria are follicular, arranged in a single lateral row. Specimen was recovered from *Mastacembelus armatus* (Lacepede, 1800) at Parbhani, Maharashtra, India. The current specimen has a huge triangular scolex (5.57 x 3.24 mm) with a pronounced semicircular rostellum equipped with 60 62 hooks (0.083 x 0.009 mm), which sets it apart from *Senga nandedensis* Fartade Asawari and Fartade Madhukar, 2014. Two spatulate bothria that extend posteriorly (6.38 x 2.07 mm) are present. There is no neck. Rectangular in shape, mature proglottids measure 0.89 x 8.86 mm, eight times wider than long. There are 150 200 tiny, oval testes (0.20 x 0.11 mm). The medium-sized oval (0.13 x 0.133 mm) cirrus pouch has thin tubular cirrus (0.09 x 0.05 mm). The ovary is dumbbell-shaped and bilobed (2.07 x 0.038 mm). The cirrus pouch is behind the narrow vagina (0.61 x 0.17 mm). The genital pore measures 0.038 mm and is circular and tiny. On the lateral borders, vitellaria are follicular. Specimen collected from *Mastacembelus armatus* in the Godavari Basin, Maharashtra, India. The present form is distinct from *Senga rostellata* Deshmukh et al., 2016 in that it has a rostellum (0.084 x 0.264 mm) with 20 22 hooks, paired bothria, and a triangular scolex (1.180 x 0.494 mm). The length of the neck is 0.365 x 0.348 mm. Mature proglottids measure 0.325 x 1.236 mm, which is wider than long. The pre-ovarian testes are tiny, oval to rounded, and range in number from 25 to 30 (0.056 mm). It has a short, thin cirrus (0.109 x 0.016 mm) and measures 0.123 x 0.078 mm. Vas deferens measures 0.061 x 0.028 mm and is straight. The genital atrium is 0.039 x 0.028 mm and is tiny and elliptical. Vaginal curvature (0.089 x 0.016 mm) was modest. The ootype measures 0.044 mm and is small and oval. Lobes of the ovary measure 0.264 x 0.067 mm. There are 30 to 35 long, tapering eggs (0.045 x 0.025 mm) in a saccular uterus. The uterus has an anterior pore. The current specimen has a triangle scolex (2.388 x 0.494 mm) with a rostellum (0.258 x 0.550 mm) that has 28 30 hooks, which sets it apart from *Senga triangulata* Nanware et al., 2016. Mature proglottids measure 0.429 x 2.725 mm, which is wider than long. They measure 0.045 x 0.067 mm. It measures 0.264 x 0.107 mm. The vaginal atrium (0.298 x 0.017 mm) is where the vagina originates. The ovary is 0.534 x 0.197 mm in size. The broad segments of gravid measure 0.559 x 3.162 mm. This specimen is different from *Senga follicularae* Barshe et al., 2023 in that it has a triangular rostellum (0.212 x 0.450 mm) with 20 22 hooks and a scolex (1.537 x 0.901 mm). Mature proglottids have a bilobed ovary and 50 55 testes, and they are almost five times wider than long. According to *Channa striata* (Bloch, 1793), the current worm is different from *Senga anusayae* sp. nov. in that it has a conical scolex with 60 hooks, mature proglottids that are broader than long, and 95 100 testes. The current worm, which was taken from *Mastacembelus armatus* in India, is different from *Senga koradinesis* sp. nov. in that it has a triangular scolex, 30 35 hooks, wider mature segments, and 45 50 testes. The present form differs from *Senga snehalatae* sp. nov. in having a pear-shaped scolex with 30 hooks, broader mature proglottids, and 275 280 testes, recorded from *Channa striata* (Bloch, 1793) in India. Based on these distinguishing morphological traits, the present specimen is considered distinct from all previously described *Senga* species. Accordingly, it is proposed as a new species, *Senga namdeoraoi* sp. nov., named in honour of Late Shri Namdeorao Borde, father of Dr. Sunita Namdeorao Borde.

4. TAXONOMIC SUMMARY

Genus	-	<i>Senga</i> Dollfus, 1934.
Species	-	<i>Senga namdeoraoi</i> , Sp. Nov.
Type host	-	<i>Channa straita</i> , Bloch, 1793.
Habitat (Site)	-	Intestine.
Type locality	-	Koradi Dam District Buldhana (M. S.) India
Holotype and Paratype	-	Deposited in the Research Lab., Department of Zoology, Lal Bahadur Shastri College, Partur Dist -Jalna

Etymology - Named is proposed in honor of Prof. Sunita Borde madam father name Late. Namdeorao Borde.

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