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A NEW SPECIES OF DANIONID FISH (DANIONIDAE: CHEDRINAE) FROM IMPHAL RIVER, NORTH-EASTERN INDIA

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A New Species of Danioid Fish (Danionidae, Chedrinae) from Imphal River, North-Eastern India. Arunkumar, L. & Thoibi, M. — *Barilius imphalensis* sp. n. is described from the Imphal River, a main head-water tributary of Chindwin River basin in Manipur, a hill grit state of North-Eastern India. It is distinguished from all its congeners in having the following combination of characters: absence of barbels, presence of tubercles on the tip of snout, presence of dentary tubercles, presence of complete lateral lines with 41 scales, pre-dorsal scales 18, head depth at supra-occipital 20.2–23.4% SL, body depth at dorsal fin origin 25.0–28.1% SL, pre-anal length 65.1–68.5% SL, height of dorsal fin 22.9–24.8% SL, height of anal fin 26.1–28.9% SL, eye diameter 6.3–6.9% SL and 26.2–26.8% HL, inter-orbital width 32.3–38.5% HL and short blue vertical bars along the body 15–17. Key to species of the genus *Barilius* of the North-Eastern India and their distribution pattern in the six different river drainage systems are provided.

Key words: new species, Chindwin Basin, fish fauna, Manipur state, morpho-taxonomy.

Introduction

The danionid genus *Barilius* is a diverse group of small cyprinid fishes found in freshwater habitats across the Indian subcontinent and Southeast Asia. *Barilius* are known for their elongated, laterally compressed bodies, rounded belly and lateral

line in the lower half of the body; barbels may be absent or present; mouth terminal, pointed and obliquely directed upward; cleft of mouth extends upto anteriormost or beyound the middle of eye (Hamilton, 1822; Rainboth, 1996; Howes, 1980). Males of *Barilius* are colourful and have tubercles on various parts of the body (Vishwanath, 2021). *Barilius* are also characterized by the presence of 7 to 26 vertical bars or spots on flank; dorsal-fin inserted behind the pelvic fin origin and lies between 13 to 18 vertebrae; anal-fin inserted or originated between 18 to 26 vertebrae (Hamilton, 1822; Rainboth, 1996; Howes, 1980).

There are forty six well known species of the genus in the different drainages of the Indian sub-continent, Myanmar, China, Iraq, Thailand & Afghanistan viz; *Barilius ardens* Knight et al (2015); *B. arunachalensis* Nath et al (2010); *B. bakeri* Day (1865); *B. barila* (Hamilton, 1822); *B. barna* (Hamilton, 1822); *B. barnoides* Vinciguerra (1890); *B. bendelisis* (Hamilton, 1807); *B. bernatziki* (Koumans, 1937); *B. canarensis* (Jerdon, 1849); *B. caudiocellatus* Chu (1984); *B. chatricensis* Selim & Vishwanath (2002); *B. cynochlorus* Plamoottil & Vineeth (2020); *B. dimorphicus* Tilak & Husain (1990); *B. dogarsinghi* Hora (1921); *B. evezardi* Day (1872); *B. gatensis* (Valenciennes, 1844); *B. howesi* Barman (1986); *B. infrafasciatus* Fowler (1934); *B. kamjongensis* Arunkumar et al (2023); *B. kanaensis* (Arunkumar & Moyon, 2017); *B. koratensis* Smith (1931); *B. lairokensis* Arunkumar & Singh (2000); *B. lanceolatus* Husain (2010); *B. malabaricus* (Jerdon, 1849); *B. mesopotamicus* Berg (1932); *B. modestus* Day (1872); *B. nelsoni* Barman (1988); *B. ornatus* Sauvage (1883); *B. pakistanicus* Mirza & Sadiq (1978); *B. pectoralis* Husain (2012); *B. profundus* Dishm a & Vishwanath (2012); *B. pulchellus* (Smith, 1931); *B. putaoensis* (Qin et al, 2019); *B. radiolatus* Gunther (1868); *B. sajikensis* (Moyon & Arunkumar, 2021); *B. shacra* (Hamilton, 1822); *B. signicaudus* Tejavej (2012); *B. siangi* Kumari et al (2024); *B.* sp.1 Dishma & Vishwanath (2012); *B.* sp. Sharma (2002); *B. tileo* (Hamilton, 1822); *B. torossus* Devi (2005); *B. torsai* Kumari et al (2019); *B. vagra* (Hamilton, 1822); *B. vittatula* Devi (2005).

The Imphal River in Manipur, North-Eastern India is a tributary of the Chindwin River system. Several *Barilius* species have been recorded in the northeastern Indian states of Manipur. However, recent surveys in the region have revealed the presence of a previously undescribed *Barilius* species. In this study, we report the discovery and characterization of a new *Barilius imphalensis sp. n from the Imphal* River, in Manipur, North-Easten region of India.

Material and Methods

New fish specimens were collected from Imphal River at Khongnang Pheidekpi, Imphal West District, Manipur India (Fig. 1), by using hook fishing tools. Measurements were made point to point of specimens wherever possible with dial caliper to the nearest 0.1 mm. The colour in fresh specimens were noted before fixation and preservation in 10% formaldehyde. Counts and measurements were provided based on standard methods (Hubbs & Lagler, 1958; Kottelat, 1990 and Tejavej, 2010). Classification of Tan & Armbruster (2018) was followed. Examined materials were deposited in the Manipur University Museum of Natural History (NH/MUM), Canchipur, Manipur.

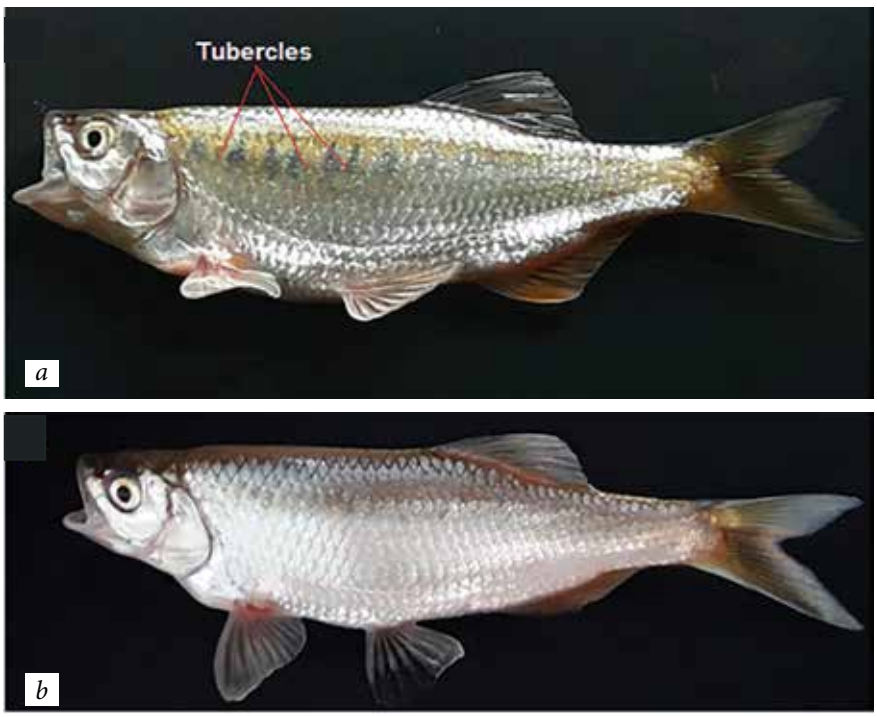

Fig. 1. *Barilius imphalensis* sp. n. side view of Holotype, 104/NH/MUM,108.4 mm SL: *a* — male = showing body tubercles; *b* — female = showing without tubercles

Fig. 2. *Barilius imphalensis* sp. n: *a* — dentary tubercles of preserved specimen (*Barilius imphalensis* sp. n.); *b* —tubercles on the tip of snout (marked by red circle)

Comparative Materials

Barilius ardens: Data from Knight et al. (2015).
Barilius arunachalensis: Data from Nath et al. (2010).
Barilius barila: MUMF 5049, 5051, 83.2–89.5 mm SL, Khuga River, Churachandpur, Manipur, India. Additional data from Dishma & Vishwanath (2012). Data from Vishwanath (2021).
Barilius barna: Data from Nath et al. (2010) and Vishwanath (2021).
Barilius barnoides: CMK 4052, 4280, 2 exs; Mae Hong Son Province, Thailand. (CMK = Collections of Maurice Kottelat, Switzerland). Data from Nath et al. (2010), Talwar & Jhingran (1991), Vishwanath & Manojkumar (2002), Qin et al. (2019), Vishwanath (2021), Mukerji (1934) and Kottelat (1984).
Barilius bendelisis: MUMF 4167–4171; 5 exs; 80.5–134.0 mm SL. Noney. Additional data from Dishma & Vishwanath (2012) and Nath et al. (2010).

Fig. 3. Type locality of *Barilius imphalensis* sp. n. indicated as a red triangle

Fig. 4. Imphal River at Khongnang-Pheidekpi, Manipur and habitat of *Barilius imphalensis* sp. n.

Barilius bernatziki: Data from Koumans (1937), Smith (1945) and Tejavez (2012 a).
Barilius canarensis: Data from Knight et al. (2015).
Barilius caudiocellatus: Data from Chu (1984) and Chen et al. (2022).
Barilius chatricensis: Holotype: MUMF 530/1, 86. 4 mm (SL) Chatrikong River, Ukhrul District, Manipur, India, 150 km from Imphal. Coll. Keishing Selim, 16. XI. 1995. Paratype: MUMF 531/9, 58.6–89.00 mm (SL). Data from Selim & Vishwanath (2002).
Barilius cyanochlorus: Data from Plamoottil & Vineeth (2020).
Barilius dogarsinghi: Type Specimen-F9983/1. Zoological Survey of India (Ind. Mus.). Data from Hora (1921), ZSI/F 2208/2, n = 3; MUMF 360/n = 10. Data from Selim & Vishwanath (2002). Additional data from Talwar & Jhingran (1991), Jayaram (1999), Nath et al. (2010), Tejavej (2012 a) and Vishwanath (2021).
Barilius howesi: Data from Barman et al. (2011).
Barilius infrafasciatus: Data from Smith (1945), Barman (1985), and Tejavej (2012 b).
Barilius kamjongensis: Holotype: 125/NH/MUM.27.11.2021; 24°86′ N & 94°50′ E, 101.1 mm SL, 111.7 mm TL, Taretlok at Lunbung, Kamjong District, Manipur, India, Coll. Er silia Jajo and her party, Paratypes: 125/NH/MUM, 5 exs, 75.5–97.2 mm SL 96.5–121.6 mm TL, data as for holotype. Data from Arunkumar et al. (2023).
Opsarius kanaensis: 75/NH/MUM, 53.6 mm SL, 68.5 mm TL, India: Manipur from Kana Rivers at Sajik Tampak, located in Chakpikarong of Chandel District and data from Arunkumar & Moyon (2017).
Barilius lairokensis: Holotype MUMF 3700/1A, TL 110 mm; SL.87 mm; from Lairok Maru, Moreh, Chandel District, Manipur, 17. X. 1992. Coll. Laifrakpam Arunkumar. MUMF 27075, 105.0 mm SL, Moreh Bazar, Moreh, Chandel District, Manipur, India. Data from Arunkumar & Singh (2000). Additional data from Dishma & Vishwanath (2012).
Barilius lanceolatus: Data from Husain (2010) & (2018).
Barilius ngawa: Holotype: MUFM 149, 84.8 m Sherou River (tributary of Manipur River), 83 km south of Imphal, Manipur, W. Manojkumar, 20. iii. 1993. Paratype: MUFM 150, 61.5–134.3 mm. Data from Vishwanath & Manojkumar (2002). Additional data from Dishma & Vishwanath (2012 a, b).
Barilius malabaricus: Data from Knight et al. (2015).
Barilius nelsoni: Data from Barman (1989) and Sen & Khynriam (2014).
Barilius ornatus: ZSI6/2986-87, Kolkata. Data from Kottelat (1984), Vishwanath & Manojkumar (2002 a) and Tejavej (2012 b).
Barilius pectoralis: Data from Husain (2012).
Barilius profundus: Data from Dishma & Vishwanath (2012).
Barilius pulchellus: Data from Rainboth (1996), Smith (1931) and Vilasri et al. (2018).
Opsarius putaoensis: Data from Qin et al. (2019).
Barilius radiolatus: Data from Günther (1868), Nath et al. (2010), Sen & Khynriam (2014), and Kumari et al. (2019).
Opsarius sajikensis: Holotype: 80/NH/MUM, 99.0 mm SL; 127.8 mm TL; from Kana River at Sajik-Tampak near Molnaum village, Yu river basin, about 43 km towards South from district headquater, Chandel, from Chandel Bazar, Chandel District, Co-ordinate: Latitide 24°0′ N–24°15′ N and longitude 93°45′ E–94°0′ E, collected by the fishermen of Sajik-Tampak & Moyon along with L. Arunkumar, 7th April 2017. Data from Moyon & Arunkumar (2019).
Barilius shacra: Data from Day (1878), Gunther (1968), Husain (2012) and Vishwanath (2021).
Opsarius siangi: Data from Kavita kumari et al. (2024).
Barilius signicaudus: Data from Tejavej (2012).
Barilius sp.: MUMF 4168, I ex; 57 mm SL, Leimatak River, Leimatak, Tamenglong District, March 10, 2000. Data from Sharma (2002).
Barilius sp. 1: MUMF 27001-27005, 5, 55.2–71.1 mm SL; Koladyne River at Kolchaw, Lawntlai District, Mizoram, India. Data from Dishma & Vishwanath (2012 b).
Barilius tileo: MUMF 27076, 128.1 mm SL, Untrao River, Byrnihat, Norbong, Ribhoi District, Assam, India. Data from Dishma & Vishwanath (2012 b) and Sen (1976).
Barilius torosus: Holotype: MUMF 6232, 90.4 mm SL. Iril River at Keibi, Imphal, January 20, (2002) ID. Paratype: MUMF 6263, I, 86.7 mm SL same data as holotype. Zencat. 4, 88.2–89.4 mm SL. Data from Devi (2005).
Barilius torsai.: Holotype: ZSI FF5542, 12.XI.2015, 26.729 °N & 89.325 °E, 71.41 mm SL, Torsa River, Jaldapara, Alipurduar District, West Bengal, India, coll. A. Roy Chaudhary. Paratype:

ZSI FF5543, 26.VII.2015, 26.729 °N & 89.325 °E, 74.56 mm SL, data same as for holotype, coll. A. Mitra; CIFRI F10003-10010, 8 ex., 26.VII.2015, 71.46–74.23 mm SL, data same as holotype, coll. A. Mitra; CIFRI F10011, 12.XI.2015, 71.46 mm SL, data same as for holotype, coll. A. Roy Chaudhary. Data from Kumari et al (2019).
Barilius vagra: MUMF 4091–4093, 88.0–107.3 mm SL, Barak River, Vangchengphai, Tamenglong District, Manipur, India. Additional data from Dishma & Vishwanath (2012 b). Uncat. 7 exs. 87–130 mm SL, Tamenglong collected by L.A.
Barilius vittatula: Holotype: MUMF 6235, 36.2 mm SL. Iril River at Keibi, Imphal, January 20, (2002) I L. Paratype: MUMF 6263, I, 86.7 mm SL same data as holotype. Uncat. 4, 88.2–89.4 mm SL. Data from Devi (2005).

Results

Barilius imphalensis sp. n. (Figs 1, *a*, *b*; 2 *a*, *b* and Table 1, A, B)

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Material. **Type. Holotype** ♂**:** 24°77′ N & 93°94′ E, 108.42 mm SL, Imphal River at Khongnang Pheidekpi, Imphal West District, Manipur, North Eastern India, 20.11.2020 (Th. Roben Singh leg.) (104/NH/MUM). **Paratypes:** 2 ♀, data as for holotype, 106.63–110.73 mm SL (105/NH/MUM).

Diagnosis. *Barilius imphalensis* sp. n. is distinguished from the congeners in the Indian sub-continent, Myanmar and Thailand in having a combination of the following characters: absence of barbels, presence of minute tubercles on the tip of snout, presence of minute dentary tubercles on the lower jaw, lateral line complete with 41 scales, pre-dorsal scales 18, eye diameter 6.3–6.9% SL and 26.2–26.8% HL, pre-anal length 65.1–68.5% SL, depth of head at supra-occipital 20.2–23.4% SL, height of dorsal fin 22.9–24.8% SL, length of anal fin 26.1–28.9% SL, inter-orbital width 32.3–38.5% HL, short blue vertical bars along the body 15–17, anal fin orange red and pectoral fin pale reddish.

Description. Morphometric data and meristic data are shown in Table 1, A, B. General body shape and appearances are shown in Fig. 1, *a*, *b*; 2 *a*, *b*. Body laterally compressed, dorsal profile in front of dorsal fin origin straight, gently sloping towards the base of caudal peduncle. Ventral profile slightly curved till pectoral fin origin, then straight up to anal fin origin and there after sloping dorsally to the end of caudal peduncle. Head moderately compressed, longer than wide. Snout blunt, profile dorsally curved and rounded when view laterally, length shorter than inter-orbital space. Eye large and its diameter smaller than inter-orbital space. Inter-orbital space slightly arched. Mouth terminal and obliquely upwards. Gape of mouth reaches the anterior margin of eye. Minute tubercles present on the tip of snout.

Barbels absent. Lips thin, upper jaw slightly longer than lower jaw. Dorsal fin inserted posterior to pelvic fin origin 1 simple (unbranched) and 7 branched rays and closer to caudal fin base than tip of snout, longer than pectoral and pelvic fins. Pectoral fin with 2 simple, and 10 branched rays, shorter than head length and its tip reaching the anterior margin base of pelvic fin. Pelvic fin with 1 simple and, 7 branched ray, shorter than head length and pectoral fin, not reaching anal fin origin but reaching anus. Anal fin with 1 simple, and 11 branched rays, not reaching caudal peduncle when adpressed and straight margin. Caudal

Table. 1A. **Morphometric and meristic data of *Barilius imphalensis* sp. n. (n = 3)**

Parameter	Holotype	Paratypes	Mean
Standard length (SL, mm)	108.4	106.6–110.7	108.5
	In % of standard length		
Body depth at dorsal fin origin	28.1	25.0–25.6	26.2
Body depth at pelvic fin origin	29.2	26.9–26.6	27.6
Body depth at anal fin origin	24.2	22.1–22.7	23.0
Caudal peduncle depth	10.0	9.7–9.9	9.8
Caudal peduncle length	16.9	16.6–17.1	16.8
Pre-anus length	64.2	64.8–65.6	64.8
Pre-anal length	65.1	66.6–68.5	66.7
Pre-dorsal length	57.7	56.9–58.6	57.7
Pre-pelvic length	49.0	49.3–49.7	49.3
Post dorsal length	71.3	70.9–71.1	70.9
Pre-pectoral length	28.3	28.4–27.5	28.0
Pectoral fin to pelvic fin length	20.7	20.8–22.3	21.2
Pelvic fin to anal fin length	16.1	17.3–18.8	17.4
Anal fin to caudal fin base length	34.9	33.4–31.5	33.2
Pelvic fin to anus length	15.2	16.4–15.1	15.5
Caudal fin length of upper lobe	24.4	22.0–23.5	23.3
Caudal fin length of lower lobe	27.9	25.5–27.6	27.0
Dorsal fin length	28.3	26.7–27.3	27.4
Dorsal fin height	24.8	22.9–23.5	23.7
Pectoral fin length	23.1	21.2–22.7	22.3
Pelvic fin length	18.6	17.2–18.2	18.0
Anal fin height	28.9	26.1–28.0	27.6
Dorsal fin base length	14.2	14.2–15.1	14.5
Anal fin base length	19.2	16.6–19.4	18.4
Lateral head length	24.0	25.6–25.7	25.1
Dorsal head length at occiput	18.4	18.2–18.3	18.2
Head depth at supra-occipital	20.3	20.2–23.4	21.3
Pre-orbital head depth	13.3	12.9–13.7	13.3
Post-orbital head depth	17.8	16.2–18.5	17.5
Upper jaw length	9.0	9.7–10.7	9.8
Lower Jaw length	7.7	9.0–9.3	8.6
Head width at nares	9.2	8.7–10.0	9.3
Head width at neck	12.8	12.2–12.4	12.4
Body width at dorsal fin origin	11.2	10.9–11.0	10.9
Body width at anal fin origin	9.9	9.0–9.4	9.4
Snout length	7.8	7.7–7.7	7.7
Eye diameter	6.3	6.8–6.9	6.6
Inter-orbital width	9.2	8.3–9.0	8.8

Table 1B. **Morphometric and meristic data of *Barilius imphalensis* sp. n. (n = 3)**

Parameter	Holotype	Paratypes	Mean
In % of Head length			
Head length of supra-occipital	74.3	70.9–71.1	72.1
Head depth at supra-occipital	84.7	78.8–90.9	84.8
Head width at neck	51.0	47.5–48.4	48.9
Head depth at anterior eye	55.5	50.3–53.1	52.9
Head depth at posterior eye	74.3	72.1–73.0	73.1
Interorbital width	38.5	32.3–35.1	35.3
Internarial width	18.2	18.0–19.6	18.6
Snout length	26.9	27.4–27.5	27.2
Postorbital length	53.5	54.9–56.1	54.8
Eye diameter	26.2	26.3–26.8	26.4
Upper jaw length	40.9	38.4–41.4	40.2
Lower jaw length	34.0	35.2–36.5	35.1
In % of Caudal Peduncle length			
Caudal peduncle depth	59.2	56.7–59.2	58.3
In % of distance between Pelvic and Anal fins			
Vent to anal fin origin	5.8	5.4–5.6	5.6
In % of distance between Pelvic and Caudal fins			
Vent to pelvic fin origin	29.8	30.1–32.7	30.9
Meristic count			
Dorsal fin (simple) ray	1	1	
Dorsal fin (branched) rays	7	7	
Pectoral fin (simple) ray	2	2	
Pectoral fin (branched) rays	10	10	
Pelvic fin (simple) ray	1	1	
Pelvic fin (branched) rays	7	7	
Anal fin (simple) ray	1	1	
Anal fin (branched) rays	11	11	
Caudal fin (upper lobe simple) rays	2	2	
Caudal fin (upper lobe branched) rays	8	8	
Caudal fin (lower lobe simple) rays	3	3	
Caudal fin (lower lobe branched) rays	7	7	
Circumpeduncular scales	14	14	
Lateral line scales	41	41	
Lateral line transverse scales	8.5/3.5	8.5/3.5	

fin deeply forked, lower lobe longer than upper lobe, with 2 simple, and 8+7 branched, 3 principal rays.

Scales moderate, circumpeduncular scales 14, lateral line complete with 41 scales, lateral line transverse scales 8.5/3.5. Axillary scales present on pectoral and pelvic fin bases. Scales of male specimen have tuberculated in 12 rows approximately in the lateral sides of body.

Colour. In live and fresh specimens, dorsal side appears greyish, side and belly silvery. Only 3–4 bars are distinctly seen in live conditions and after preservation, 15–17 bars clearly seen on the side of body, ends above the lateral line. Inter-bars are wider than bars. Anal fin with orange red, pectoral and pelvic- fins light orange. Dorsal and caudal fins are greyish. Lower lobe of caudal fin is more greyish than upper lobe. Females have more number of lateral body bars. And males bear tubercles while females don't bear.

Etymology. The new species, *Barilius imphalensis* is named after the Imphal River, located at Khongnang-Pheidekpi, Imphal West District, Manipur.

Local Name. Ngawa in Manipuri Meitei language.

Distribution and Habitat. *Barilius imphalensis* sp. n. is presently known from the Imphal River in Manipur, North Eastern India (Figs 3 and 4), *Anguilla bengalensis* (Gray, 1831); *Esomus danricus* (Hamilton, 1822); *Pethia meinngangbii* (Arunkumar & Singh, 2003); *Puntius sophore* (Hamilton, 1822); *P. chola* (Hamilton, 1822); *Systomus sarana* (Hamilton, 1822); *Chanda nama* (Hamilton, 1822); *Glossogobius giuris* (Hamilton, 1822); *Gagata dolichonema* He, 1996; *Mystus ngashep* Darshan et al., 2011; *Ompok pabo* (Hamilton, 1822); *Channa punctata and Mastacembelus armatus* (Lacepede, 1800) etc. are some co-occurring fishes. Bottom of the habitat places was full of graveled and cobbled. *Eiranthus procerus, Saccharum munja, S. bengalensis, Riccinus communis* and many weed grasses dominantly covered on the bank of the river. Depth of the habitat varied from 3 to 5 feet. Water bodies are cleared during the early morning but become dirty at the day time. It is due to human habitation on the sides of river bank. The river is not a fast-flowing water body.

Discussion

The distribution pattern of *Barilius* species in the six different river drainage systems of north eastern India is shown in Table 2 and their percentage in Fig. 5. *Barilius imphalensis* sp. n. differs from *B. ardens* in having longer post dorsal (70.9–71.3% SL vs. 45.8–48.8), shallower body depth at dorsal fin origin (25.0–28.1% SL vs. 30.2–34.2), shallower caudal peduncle depth (9.7–10.0% SL vs. 15.0–15.9), longer dorsal fin (26.7–28.3% SL vs. 15.6–18.1), more dorsal fin height, length (22.9–24.8% SL vs. 15.6–18.1), smaller eye diameter (26.2–26.8% HL vs. 28–32), more lateral line scales number (41 vs. 36–37+1), fewer branched dorsal fin rays (7 vs. 10.5), fewer branched pelvic fin rays (7 vs. 8), and absence vs. presence of vertically-elongate blotches 4–6 scales high respectively.

Barilius imphalensis sp. n. differs from *B. arunachalensis by* deeper body at dorsal fin origin 25.0–28.1% SL vs. 20.4–20.8, larger eye diameter 26.2–26.8% HL 16.4–20.0, presence vs. absence of 15–17 vertical bars of the lateral side of body respectively.

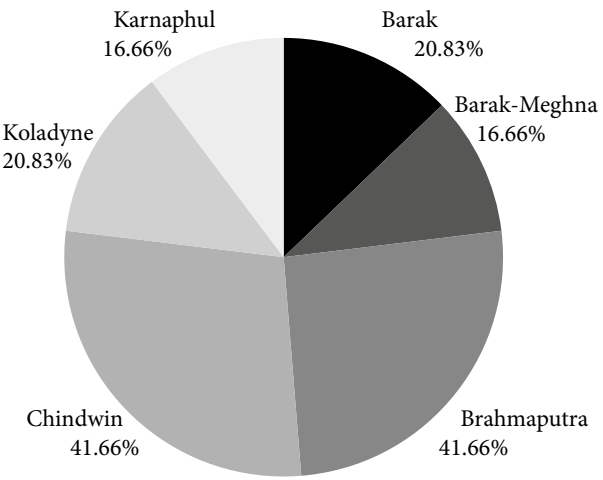

Fig. 5. Pie chart showing distribution pattern of *Barilius* species in the six different river drainage systems of North-Eastern India

Hamilton (1822) reported that *Cyprinus barila* (i. e. *B. barila*) had devoid of tendrils (i. e. barbels) and presence of two lateral lines. While Day (1877) reported that *B. barila* had two small rostral pair of barbels. *Barilius. imphalensis* sp. n. differs from *B. barila* by longer head 24.0–25.7% SL vs. 20.8–21.6, longer pre-dorsal 56.9–58.6% SL vs. 55.5–55.6, smaller eye diameter 6.3–6.9% SL 25.5–25.8, shorter caudal peduncle 16.6–17.1% SL vs. 80.5–80.6, thinner caudal peduncle 9.7–10.0% SL vs. 43.5–50.5, lesser pre-dorsal scales number 18 vs. 22 respectively. Vishwanath (2021) reported that it had one or two pair of barbels. *B. imphalensis* differs from *B. barlia* in having longer head length than pectoral fin length vs. equal head length with pectoral fin length, presence of 15–17 vs. 24–26 bars on lateral sides and lesser predorsal scales number 18 vs. 19–20.

Barilius imphalensis sp. n. differs from *B. barna* by longer pre-dorsal distance (56.9–58.6% SL vs. 53.9–54.9), longer head (24.0–25.7% SL vs. 20.8–21.6), and deeper head at supra-occipital (78.8–90.9% HL vs. 75.5–78.3), shorter caudal peduncle (66.4–76.7% HL vs. 80.6) and pelvic fin reaching vs not reaching the anus respectively. It is easily distinguished from *B. barna* by having more lateral line scales number 41 vs. 37 (36–38), predorsal scales number 18 vs. 15–16, and 15–17 vs.10–11 bars on lateral sides of body.

Barilius imphalensis sp. n. differs from *B. barnoides* by longer anal fin height 26.1–28.9% SL vs.16.8–17.3, longer pelvic fin 17.2–18.6% SL vs. 15.0–16.2, shorter caudal fin 25.5–27.9% SL shorter head length 24.0–25.7% SL vs. 26.1–26.4, lesser body depth at pelvic fin origin 25.0–28.1% SL vs. 29.6–32.4, shorter head at occiput 70.9–74.3% HL vs. 78.1–79.4, shorter snout 26.9–27.5% HL vs. 29.5–33.8, smaller eye diameter 26.2–26.8% HL vs. 27.3–29.4, lesser depth of caudal peduncle 56.7–59.2% caudal peduncle length, vs. 65.4–79.7, shorter distance between vent to anal fin origin 5.4–5.8% distance between pelvic and anal fins 8.9–9.8, shorter distance between vent to pelvic fin origin 29.8–32.7% distance between pelvic and caudal fins 33.6–34.8, absence vs. presence of 2 pair of barbels and lesser pre-dorsal scales 18 vs. 19–21, more lateral line scales 41 vs. 34–36, more predorsal scales 18 vs. 14–16 and 15–17 vs. 7–8 bars on lateral body sides respectively.

Barilius imphalensis sp. n. differs *from B. bendelisis* by more branched anal fin rays 11 vs. 7–8, lesser branched pectoral fin-rays 10 vs. 14, absence vs. presence of spotted black on the scales of body, presence of 15–17 vs. 8–11 bars on the sides of the body and absence vs. presence of 2 pair of barbels respectively.

Table 2. **The distribution pattern of *Barilius* species in the six different river drainage systems of north eastern India**

SL. No.	Scientific Names	B	BM	BR	C	KO	KA
1.	*B. arunachalensis* Nath et al., 2010	–	–	+	–	–	–
2.	*B. barila* (Hamilton, 1822)	+	+	+	+	–	+
3.	*B. barna* (Hamilton, 1822)	–	–	+	–	+	+
4.	*B. barnoides* (Vinciguerra, 1890)	–	–	–	+	–	–
5.	*B. bendelisis* (Hamilton, 1807)	+	+	+	–	+	+
6.	*B. chatricensis* Selim & Vishwanath, 2002	–	–	–	+	–	–
7.	*B. dogarsinghi* Hora, 1921	–	–	–	+	–	–
8.	*B. howesi* Barman, 1986	–	–	+	–	–	–
9.	*B. kamjongensis* Arunkumar et al., 2023	–	–	–	+	–	–
10.	*B. kanaensis* (Arunkumar & Moyon, 2017)	–	–	–	+	–	–
11.	*B. lairokensis* Arunkumar & Singh, 2000	–	–	–	+	–	–
12.	*B. nelsoni* Barman, 1988	–	+	–	–	–	–
13.	*B. profundus* Dishma & Vishwanath, 2012	–	–	–	–	+	–
14.	*B. sajikensis* (Moyon & Arunkumar, 2021)	–	–	–	+	–	–
15.	*B. shacra* (Hamilton, 1822)	–	–	+	–	–	+
16.	*B. siangi* (Kumari et al., 2024)	–	–	+	–	–	–
17.	*B.* sp.1 Dishma & Vishwanath, 2012	–	–	–	–	+	–
18.	*B.* sp. Sharma, 2003	+	–	–	–	–	–
19.	*B. tileo* (Hamilton, 1822)	+	–	+	–	–	–
20.	*B. torosus* Devi, 2005	–	–	–	+	–	–
21.	*B. torsai* kumari et al., 2019	–	–	+	–	–	–
22.	*B. vagra* (Hamilton, 1822)	+	+	+	–	+	–
23.	*B. vittatula* Devi, 2005	–	–	–	+	–	–
24.	*B. imphalensis* sp. n.	–	–	–	+	–	–
Total		5	4	10	11	5	4

Note. Presence and absence of each species is indicated by + and – sign respectively. B = Barak, BM = Barak-Meghna, BR = Brahmaputra, C = Chindwin, KO = Koladyne and KA = Karnaphuli.

Barilius imphalensis sp. n. differs from *B. bernatziki* by more number of vertical bars on the sides of body 15–17 vs. 6–7, more lateral line scales number 41 vs. 31–33, absence vs. presence of a large caudal blotch spots at the base of caudal fin and absence vs. presence of 2 pair of barbels respectively.

Barilius imphalensis sp. n. differs from *B. canarensis* by longer predorsal (56.9–58.6% SL vs. 52.2–55.7), longer post dorsal distance (70.9–71.3% SL vs. 46.7–48.8), shallower body depth at dorsal fin origin (25.0–28.1% SL vs. 31.6–33.5), shallower caudal peduncle depth (9.7–10.0% SL vs. 14.2–14.7), longer dorsal fin length (26.7–28.3% SL vs. 15.5–17.7), longer pelvic fin (17.2–18.6% SL vs. 15.7–16.1), smaller eye diameter (26.2–26.8 HL vs. 31–33), more lateral line scales (41 vs. 35–36 + 1), more predorsal scales (18 vs. 14–15) and absence vs. presence of a double row of spots along the length of body respectively.

Barilius imphalensis sp. n. differs from *B. caudiocellatus* by lesser predorsal scales number (18 vs. 21–22), more bars number on the body lateral sides (15–17 vs. 11) and absence vs. presence of black spots at the base of caudal fin respectively.

Vishwanath (2021) synonymised *Barilius chatricensis* into *B. barnoides*. Different values of counts and morphometric characters of these specimens are shown here based on data of Selim & Vishwanath (2002) and Vishwanath & Manojkumar (2002). There are lesser predorsal scales 15 vs. 17–18, (Selim & Vishwanath, 2002); lesser lateral line scales (38 vs. 40), lesser number of body bands (7–8 vs. 9–10), absence vs. presence of barbels, shorter caudal length (24.07–28.27% SL vs. 29.9–30.7) shorter predorsal (51.43–55.46% SL vs. 57.3– 57.7), shorter dorsal fin height (17.51–20.85% SL vs. 20.8– 24.0), wider head (46.47–52.90% HL vs. 43.2–45.0), longer interorbital distance (45.34–53.10% HL vs. 33.7–36.3), longer caudal peduncle (71.78–79.79% HL vs. 58.2–65.0) and shorter caudal peduncle height (48.76–57.0% caudal peduncle length vs. 65.4–79.7) respectively.

Nath et al (2010) and Qin et al (2019) reported that *B. barnoides* have two barbels (rostral and maxillary) and 14–15 vertical spots on the body sides respectively. Tejavej (2012 b) also reported *B. barnoides* have 12 lateral bands on the body sides (Fig. 6, *b* and 7, *a*). Qin et al (2019) also reported *B. barnoides* have 19–21 predorsal scales. Vishwanath (2021) mentioned that *B. barnoides* have no barbels. Due to the above differences *B. chatricensis* is a valid species.

Barilius imphalensis sp. n. differs from *B. chatricensis* in having more predorsal scales 18 vs.15, more lateral line scales 41 vs. 36–38, more body vertical bars15–17 vs. 7–8, more branched anal fin rays 11 vs. 10, lesser branched pelvic fin-rays 7 vs. 8, higher dorsal fin 22.9–24.8% SL vs. 17.5–20.8, longer anal fin 26.1–28.9 SL vs. 14.3–18.6 and narrower interorbital 32.3–38.5% HL vs. 45.3–53.1 respectively.

Barilius imphalensis sp. n. differs from *B. cyanochlorus* in having 15–17 vs. 8 vertical bands on lateral body sides, absence vs presence of a large round blotch on caudal base, 18 vs. 14–16 predorsal scales and smaller eye diameter 26.2–26.8% HL vs. 41.6–43.7 respectively.

Barilius imphalensis sp. n. differs from *B. dogarsinghi* in having absence vs. presence of barbel, lesser pre-dorsal scales 18 vs. 20, more lateral line scales 41 vs. 38–39, more vertical bars on the sides of body 15–17 vs. 8–9, absence vs. presence of dorsal fin with a dark band across its middle respectively.

Barilius imphalensis sp. n. differs from *B. howesi* in having slender body depth 25.0–28.1% SL vs. 30.0–31.7, longer head 24.0–25.7% SL vs. 21.6–23.1%, more height of anal fin 26.1–28.9 vs. 13.8–14.4 shorter pre-anal 65.1–68.5% SL vs. 70.9–77.5, more height of dorsal fin 22.9–24.8% SL vs. 16.6–17.2, longer pelvic fin 17.2–18.6% SL vs. 12.6–13.4, longer pectoral fin 21.2–23.1% SL vs. 19.1–20.4, lesser branched pectoral fin rays 10 vs. 13 and more anal branched fin rays 11 vs. 7–8 respectively. Husain et al. (1992) reported that snout length of the *B. howesi* should be 3.57 in head length (i. e. 28.01%) instead of 4.00–4.28 (i. e. 23.36–25.00) respectively.

Barilius imphalensis sp. n. differs from *B. infrafasciatus* in having more scale rows above the lateral line 8.5 vs. 6–7, more body bars 15–17 vs. 8–10 (Tejavej, 2012 a) and 10–12 (Barman, 1985) and body bars are not extended vs. extended upto lateral line scales respectively.

Barilius imphalensis differs from *B. kamjongensis* in having absence vs presence of 2 pair of barbels, more vertical lateral body bars 15–17 vs. 12–15, more lateral line transverse scales 8.5/3.5 vs. 7.5/2.5, deeper body depth at dorsal fin origin 25.0–28.1% SL vs. 22.8–26.6, smaller eye diameter 26.2–26.8% HL vs. 26.0–33.6%, deeper head at anterior eye 50.3–55.5% HL vs. 40.2–48.5 , longer upper jaw 34.0–36.5% vs. 17.4–20.8, longer post dorsal length 70.9–71.3% SL vs. 41.8–47.8, longer dorsal fin base length 14.2–15.1% SL vs. 9.7–12.7.

Barilius imphalensis sp. n. differs from *B. kanaensis* in having shorter post dorsal length 70.3–71.3% SL vs. 72.1–78.5, wider body at dorsal fin origin 10.9–11.2% SL vs. 6.6–8.8, and at anal fin origin 9.0–9.9% SL vs. 5.5–6.7, more vertical bars on the side of body 15–17 vs. 8–10, absence vs. presence of one pair of barbel, lesser number of branched pectoral fin rays 10 vs. 12, lesser branched pelvic fin rays 7 vs. 8, more anal branched fin-rays 11 vs. 9 and lesser pre-dorsal scales 18 vs. 20–22 respectively.

Barilius imphalensis sp. n. differs from *B. lairokensis* in having pre-dorsal scales 18 vs. 21, absence vs. presence of barbels, 15–17 vs. 12–13 lateral body bars, shorter pre-anal 65.1–68.5% SL vs. 71.9–75.2 and lesser branched pectoral fin rays 10 vs. 13 respectively. Nath et al. (2010) kept *B. lairokensis* in barbel absent group for their comparative account.

Husian (2010) described *Barilius lanceolatus* from the Song River, Uttarkhand without figure of it. *Barilius imphalensis* sp. n. differs from *B. lanceolatus* in having absence vs. presence of barbels, lesser lateral line scales (4 vs. 61) and lateral transverse scales (8.5/3.5 vs.12.5/7.5), lesser predorsal scales (18 vs. 24), lesser body depth (25.0–28.1% SL vs. 30.48), longer predorsal (56.9–58.6% SL vs. 55.24), and longer post dorsal (70.9–71.3% SL vs. 44.05) respectively.

Barilius imphalensis sp. n. differs from *B. malabaricus* in having longer post-dorsal (70.9–71.3 % SL vs. 46.2–62.9), shallower body depth at dorsal fin origin (25.0–28.1% SL vs. 32.2–36.3), shallower caudal peduncle depth (9.7–10.0% SL vs. 13.8–16.4), longer dorsal fin (26.7–28.3% SL vs. 19.2–22.8), smaller eye diameter (26.2–26.8% HL vs. 32–43), more lateral line scales (41 vs. 36–38 + 1), more predorsal scales (18 vs. 15–17), lesser branched dorsal fin rays (7 vs. 11,5) and presence of more bars 15–17 vs. 9–13 round or oval bluish green spots on flank respectively.

Barilius imphalensis sp. n. differs from *B. nelsoni* in having more lateral line scales (41 vs. 38–39), more predorsal scales (18 vs. 14–16), absence vs. presence of two pairs of barbels, presence of 15–17 bars on lateral sides of body vs. presence of a light darkish longitudinal band extending from behind the head to the base of caudal fin, longer head length (24.0–25.7% SL vs. 21.0–22.0), deeper body at pelvic fin origin (26.6–29.2% SL vs. 22.0–23.0) longer prepelvic (49.0–49.7% SL vs. 45.2–46.2), longer pre-anal (65.1–68.5% SL vs. 63.6–65.7), slender head depth (70.9–74.3% HL vs. 75.1–81.9) and narrower eye diameter (26.2–26.8% HL vs. 27.3–30.7) respectively.

Barilius imphalensis sp. n. differs *from B. ornatus* in having absence vs. presence of barbels, lesser branched pectoral fin rays 10 vs. 12–15, lesser branched pelvic fin rays 7 vs. 8–9, more lateral line scales 41 vs. 36–40, longer post orbital 53.5–56.1% HL vs. 40.9–52.5 and more scales 8–8.5 vs. 6–7 rows above the lateral line respectively.

Barilius imphalensis sp. n. differs from *B. pectoralis* in having absence vs. presence of two pairs of barbels, lesser pectotal branched rays 10 vs. 14, and pelvic

branched rays (7 vs. 8), more branched anal fin rays (11 vs. 8), lesser lateral line scales (41 vs. 58–59) and predorsal scales (18 vs. 29) and more lateral bars (15–17 vs. 9–10) respectively.

Barilius imphalensis sp. n. differs from *B. profundus* in having slender body depth at dorsal fin origin 25.0–28.1% SL vs. 32.0–37.3, shorter pre-dorsal 56.9–58.6% SL vs. 58.9–64.0, longer head 24.0–25.7% SL vs. 18.6–21.0, shorter pre-anus 64.2–65.6% SL vs. 67.8–74.6, longer anal fin 26.1–28.9% SL vs. 16.6–20.4, slender caudal peduncle 9.7–10.0 % SL vs. 11.4–15.6 smaller eye diameter 26.2–26.8% HL vs. 38.3–42.9, shorter snout 26.9–27.5 % HL vs. 34.9–43.1, narrower inter-orbital 32.3–38.5 % HL vs. 45.2–53.3, narrower head 47.5–51.0% HL vs. 58.5–79.2, more lateral line scales 41 vs. 30–32 and more body bars 15–17 vs. 7–10 on the sides of body respectively.

Barilius imphalensis sp. n. differs from *B. pulchellus* in having lesser branched dorsal fin rays 7 vs. 10–11, lesser anal branched fin-rays 11 vs. 14–16, lesser predorsal scales 18 vs. 21–25, more body bars 15–17 vs. 7–10 on the sides of body, anal fin longer vs. shorter than pectoral fin, smaller eye diameter 26.2–26.8% HL vs. 28.7–30.3, lateral line transverse scales 8.5/3.5 vs. 7/5.5, wider head 47.5–51.0% HL vs. 44.5, shorter snout 26.9–27.5% HL vs. 28.7, longer pelvic fin 17.2–18.6% SL vs. 15.9, shorter prepectoral 27.5–28.4% SL vs. 31.0, shorter predorsal 56.9–58.6% SL vs. 62.7 and shorter head 24.0–25.7% SL vs. 27.2 respectively.

Barilius imphalensis sp. n. differs from *O. putaoensis* in having more branched anal fin rays 11 vs. 9, lesser branched pectoral fin rays 10 vs. 11–12, more lateral line scales 41 vs. 35–38, more pre-dorsal scales 18 vs. 14–15, more circumpeduncular scales 14 vs. 12, longer pre-dorsal 56.9–58.6% SL vs.51.1–56.5, longer anal fin 26.1–28.9% SL vs. 13.9–18.2 and more body bars on lateral sides 15–17 vs. 6–7 respectively.

Barilius imphalensis sp. n. differs from *B. radiolatus* in having absence vs. presence of barbels, lesser predorsal scales (18 vs. 24–25), lesser lateral line scales (41 vs. 56–62) and lesser branched pectoral fin rays (10 vs. 16) respectively.

Barilius imphalensis sp. n. differs from *B. sajikensis* in having absence vs. presence of barbels, longer pelvic fin 17.2–18.6 % SL vs. 12.9–14.5, longer anal fin 26.1–28.9 % SL vs. 22.5–23.8, longer dorsal fin base 14.2–15.1% SL vs. 6.7–10.0, deeper head at supra-occipital 20.2–23.4 % SL vs. 16.3–18.7 and deeper post-orbital head depth 16.2–18.5 % SL vs. 14.7–15.3 respectively.

Barilius imphalensis sp. n. differs from *B. shacra* in having absence vs. presence of pairs of welldeveloped barbels, lesser pre-dorsal scales 18 vs. 25 (Husain, 2012), lesser pectoral fin rays 10 vs 13–15, lesser pelvic fin rays 7 vs.8, more branched anal fin rays 11 vs. 8 and lesser lateral line scales 41 vs. 72 (Günther, 1868) and 60–70 (Day, 1878) respectively. Vishwanath (2021) reported the presence of 31–32 predorsal scales and 55–56 lateral line scales for *B. shacra* respectively.

Barilius imphalensis sp. n. differs from *B. siangi* in having longer predorsal (56.9–58.6% SL vs. 52.67– 56.9), longer post dorsal (70.9–71.1% SL vs. 29.47–34.49), longer anal fin base (16.6–19.4% SL vs. 11.64–14.98), deeper anal fin (26.1–28.9% SL vs. 14.58–20.04), longer pectoral fin (21.2–23.1% SL vs. 17. 26–20.57), longer pelvic fin (17.2–18.6% SL vs. 11.37–15.63), lesser lateral line scales (41 vs. 65–77), lesser scales between dorsal fin origin and lateral line (8.5 vs. 11–15), lesser predorsal scales (18 vs. 32–39), more vertical bars along the flank (15–17 vs. 8–15) and absence vs. presence of two pairs of well developed barbels respectively.

Barilius imphalensis sp. n. differs from *B. signicaudus* in having absence vs. presence of rostral and maxillary barbels, absence vs. presence of caudal blotch, more vertical bars on the sides of body 15–17 vs. 6–9, more lateral line scales 41 vs. 36–39, lesser pectoral fin rays 10 vs. 12–13 and absence vs. presence of an elongated blotch at the caudal fin base respectively.

Barilius imphalensis sp. n. differ from *B.* sp which collected from Leimatak River, Leimatak, Tamenglong District, Barak River basin, Manipur, collected by Sharma, March 10, 2000 in having more pre-dorsal scales 18 vs. 14, more lateral line scales 41 vs. 36, absence vs. presence of two pair of barbels, shorter head length 24.0–25.7% SL vs. 44.7, shorter head length at occiput 18.2–18.4% SL vs. 24.2, shorter snout 7.7–7.8% SL, smaller eye 6.3–6.9% SL vs 10, narrower inter-orbital 8.3–9.2% SL vs. 12.3, shorter pre-dorsal 56.9–58.6% SL vs 61.4, shorter pre-pelvic 49.0–49.7% SL vs. 59.8, shorter pre-anus 64.2–65.6 % SL vs 72.6, shorter pre-anal 65.1–68.5% SL vs. 77.7, longer post dorsal 70.3–71.3% SL vs. 36.5, shorter pectoral fin 21.2–23.1% SL vs. 29.8, shorter caudal fin 25.5–29.6% SL vs. 40.4 and more body bars 15–17 vs. 7 respectively.

Barilius imphalensis sp. n. differ from *Barilius* sp.1 which collected from Koladyne River at Kolchaw, Lawntlai District, Mizoram, India, collected by Nebeshwar & Party in having lesser body depth at dorsal fin origin 25.0–28.1% SL vs. 32.0–37.3, shorter pre-dorsal 56.9–58.6% SL vs. 58.9–64.0, more lateral line scales 41 vs. 30–32 + 2–3, smaller eye 26.2–26.8% HL vs. 38.3–42.9, more circumpeduncular scales 14 vs. 12 and more body bars 15–17 vs. 7–10 respectively.

Barilius imphalensis sp. n. differs from *B. tileo* in having lesser lateral line scales 41 vs. 66–75 (Nath et al., 2010) and 59+4 (Dishma & Vishwanath, 2012 a, b), absence vs. presence of two pair of barbels, lesser pre-dorsal scales 18 vs. 28, 15–17 vs. 10–11 bars on the sides of body and absence vs. presence of 3 or 4 rows of alternate black blotches descending ventrally on the sides of body respectively.

Barilius imphalensis sp. n. differ from *B. torosus* in having absence vs. presence of barbels, lesser branched dorsal fin rays 7 vs. 8, lesser branched pectoral fin rays 10 vs. 12, lesser lateral line scales 41 vs. 43, lesser circumpeduncular scales 14 vs. 16, lesser vertical bars on the sides of body 15–17 vs. 18–19 and lesser caudal peduncle depth 9.7–10.0% SL vs. 14.7–15.4 respectivley.

Barilius imphalensis sp. n. differs from *B. torsai* in having more wider interorbital 32.3–38.5% HL vs. 29.6–31.0, shorter head 24.0–25.7% SL vs. 26.5–26.8, lesser depth of caudal peduncle 9.7–10.0% SL vs. 10.5–10.6, longer pre-dorsal 56.9–58.6% SL vs. 55.1–55.3, longer anal fin base 16.6–19.4% SL vs. 12.0–13.4, more dorsal fin height 22.9–24.8% SL vs. 18.7–19.5,longer pelvic fin 17.2–18.6% SL vs. 12.8–13.2, longer pectoral fin 21.2–23.1% SL vs. 17.1–18.1, longer caudal fin 25.5–27.9% SL vs. 23.0–24.1, lateral line scales 41 vs. 52–53, lesser pre-dorsal scales 18 vs. 29, more vertical bars on the sides of body 15–17 vs. 9–11 and more branched anal fin rays 11 vs. 8 respectively.

Barilius imphalensis sp. n. differs from *B. vagra* in having absence vs. presence of barbels, more bars on the sides of body 15–17 vs. 10–12, lesser lateral line scales 41 vs. 43–45 and lesser predorsal scales 18 vs. 21–26 respectively.

Barilius imphalensis sp. n. differs from *B. vittatula* in having lesser branched dorsal fin rays 7 vs.8, lesser branched pectoral fin rays 10 vs. 12, lesser branched pelvic fin rays 7 vs. 8, lesser lateral line scales 41 vs. 43, lesser circumpenduncular scales

14 vs. 16, more body bars 15–17 vs. 12, narrower body at dorsal fin origin 10.9–11.2% SL vs. 13.5–14.0, at anal fin origin 9.0–9.9% SL vs. 11.4–12.3 and head 12.2–12.8% SL vs. 54.4–55.3, lesser caudal peduncle depth 9.7–10.0 % SL vs. 10.7–11.2, maxilla extends upto anterior margin of eye vs. vertical level of middle of eye diameter, absence vs. presence of barbels, tip end of pectoral fin reaching vs not reaching pelvic fin and tip end of pelvic fin reaching vs. not reaching anus respectively.

Dichotomous Key to species of the genus *Barilius* of the North-Eastern India

1.	Absence of barbels	2
—	Presence of of barbels	6
2.	Absence of lateral body bars	*B. arunachalensis*
—	Presence of lateral body bars	3
3.	7–10 lateral body bars	4
—	15–17 lateral body bars	5
4.	32–35 lateral line– scales	*B.* sp. 1
—	36–38 lateral line scale	*B. chatricensis*
5.	41 lateral line scales	*B. imphalensis* sp. n
6.	Presence of 1 pair of barbel	7
—	Presence of 2 pairs of barbels	9
7.	Body with two or three rows of spots	*B. tileo*
—	Body without rows of spots	8
8.	36–38 lateral line scales	*B. barna*
—	38–40 lateral line scales	*B. Kanaensis*
9.	2 pairs of distinct barbels	10
—	2 pairs of minute barbels	17
10.	7 lateral body bars	*B.* sp.
—	8–15 lateral body bars	11
11.	32–39 predorsal scales	*B. siangi*
—	16–32 predorsal scales	12
12.	60–72 lateral line scales	*B. Shacra*
—	38–45 lateral line scales	13
13.	Predorsal scales 20–26	14
—	Predorsal scales 16–19	15
14.	Mandibular knob absent, 8–15 lateral body bars and 38–39 lateral line scales	*B. dogarsinghi*
—	Mandibular knob present, 43–45 lateral body bars and 43–45 lateral line scales	*B. vagra*
15.	15–17 lateral body bars	*B. kamjongensis*
—	12–13 lateral body bars	*B. vittatula*
16.	30–32 lateral line scales	17
—	41–45 lateral line scales	18
17.	7– 10 lateral body bars	*B. profundus*
18.	23–24 predorsal scales	*B. sagikensis*
—	19–21 predorsal scales	19
19.	Scales spotted with lateral body bars	*B. bendelisis*
—	Scales non-spotted with lateral body bars	20
20.	21–23 predorsal scales. Either less than 15 or more than 21 body bars.	21
—	21 predorsal scales which becomes irregular after 16th–17th scales. 18–19 lateral body bars.	*B. torosus*
21.	24–26 lateral body bars	*B. barila*
—	12–13 lateral body bars	*B. lairokensis*

Conclusion

The distribution pattern of *Barilius* species in the six different river drainage systems of northeastern India is shown in Table 2. Of the 47 species of *Barilius,* 36 species have been recorded from India. *Barilius imphalensis* sp. n. can be distinctly differentiated from its congeners by the absence of barbels, lack of black spots on scales, a predorsal scale count of 18, 15–17 vertical bars on the lateral sides of body and a lateral line scale count of 41.

Barilius imphalensis sp. n. adds to our understanding of the freshwater ichthyodiversity of the Imphal River and the eastern-Himalayan ecoregion. Fish diversity and conservation of freshwater fishes in Manipur and surrounding regions need to be improved, and more exploratory surveys are required.

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